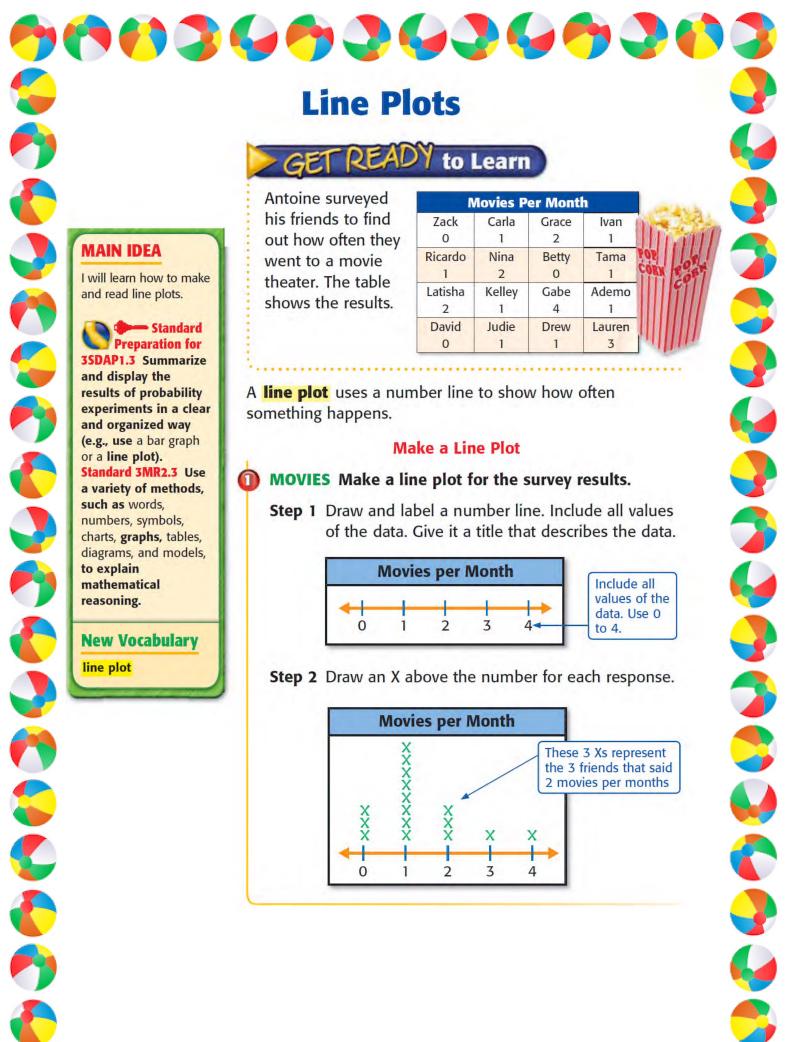
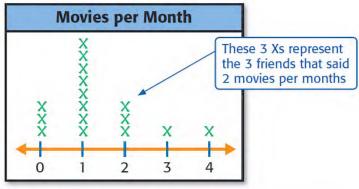


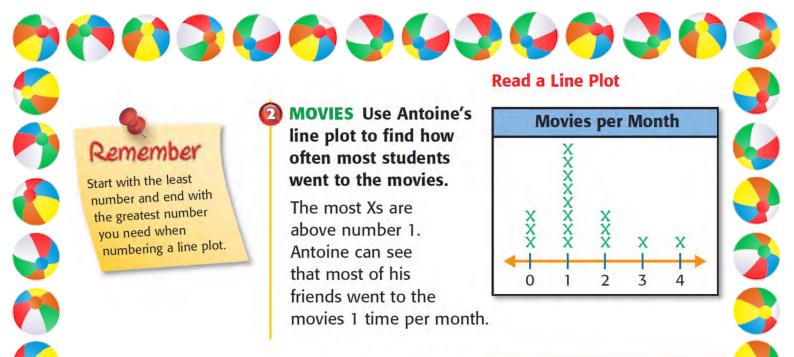
The lengths of the bars for the sloth and the koala are the longest. So, the sloth and the koala sleep the most.

هذكرات جامزة للطباعة





www.Cryp2Day.com وذكرات جامزة للطباعة

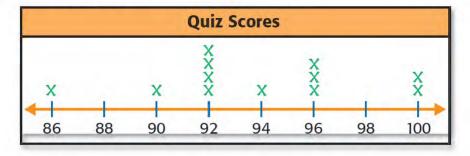


グープ とこべ What You Know

Display each set of data in a line plot.

Th	ird-Grad	le Shoe Siz	ze
Jose	Ana	Julia	Martin
2	4	8	3
Lin	Tanya	Ronaldo	Cheye
6	5	3	4
William	Cole	Nat	Gabriel
4	5	4	5

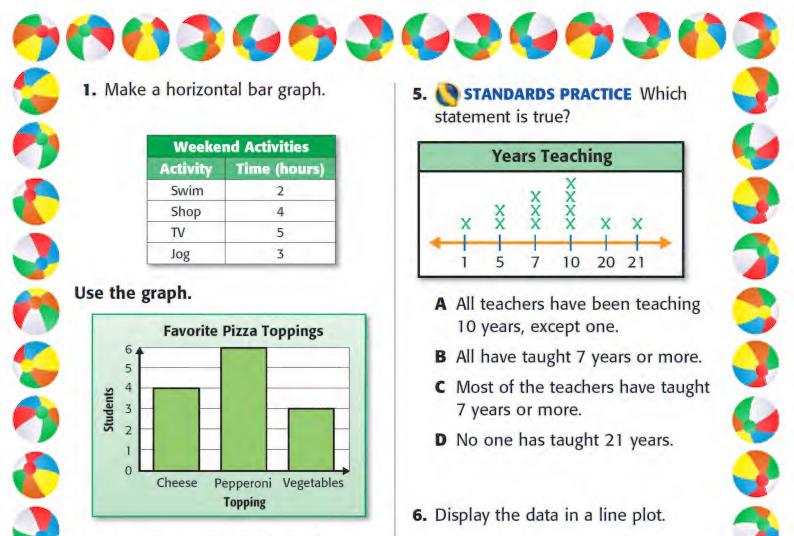
For Exercises 3 and 4, use the line plot below.



www.Cryp2Day.com هذكرات جاهزة للطباعة

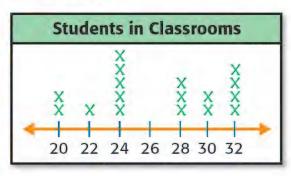
2.

- **3.** How many student's quiz scores are recorded? Explain.
- **4.** What is one conclusion you can draw from this line plot? Explain.

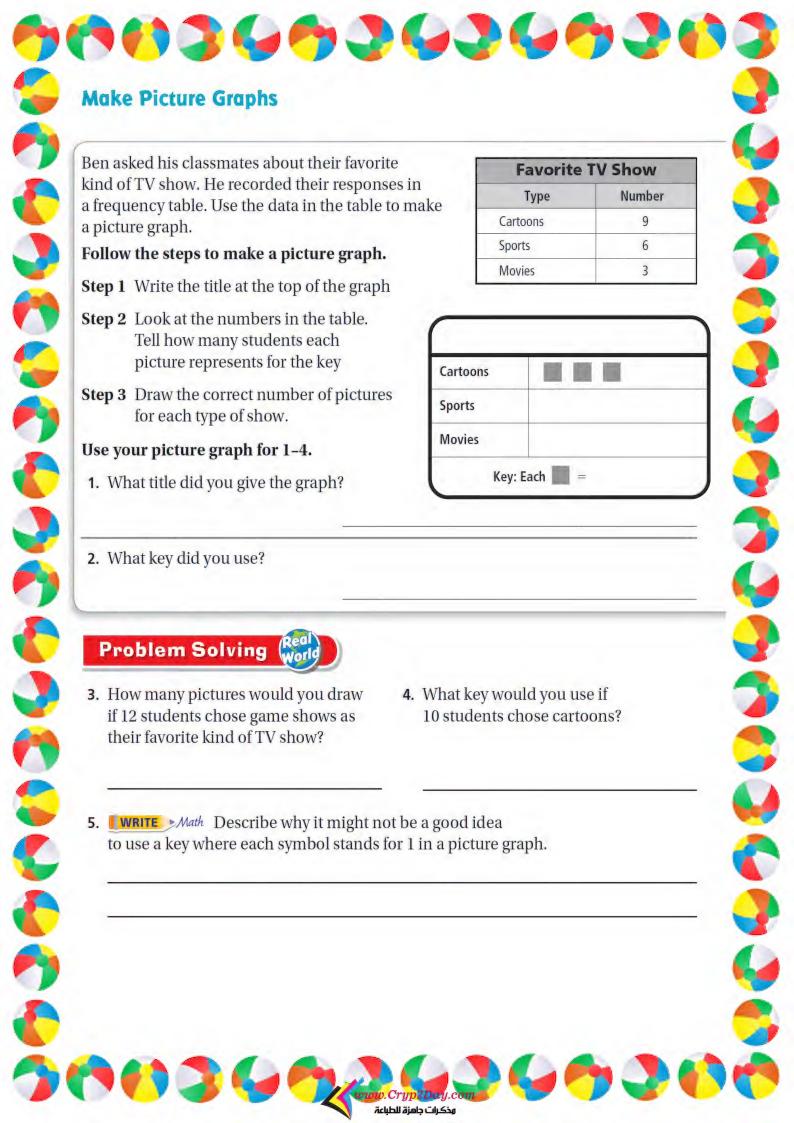


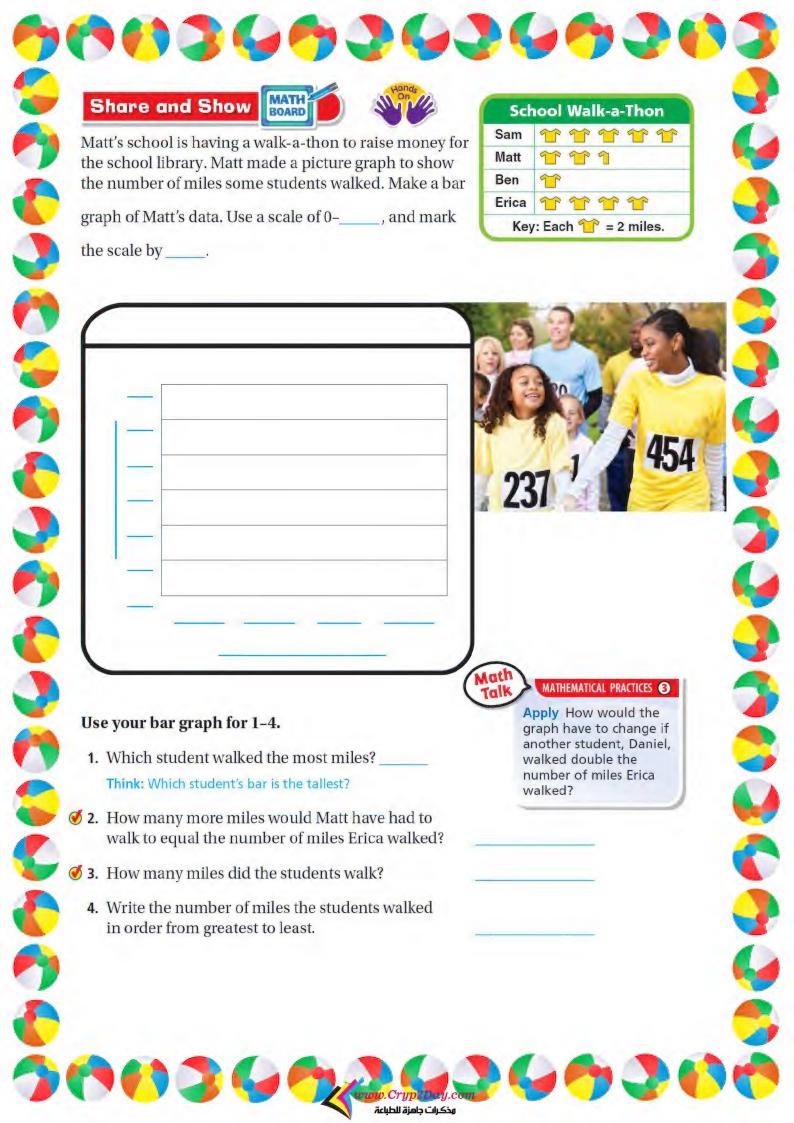
ونكرات جامزة للطباعة

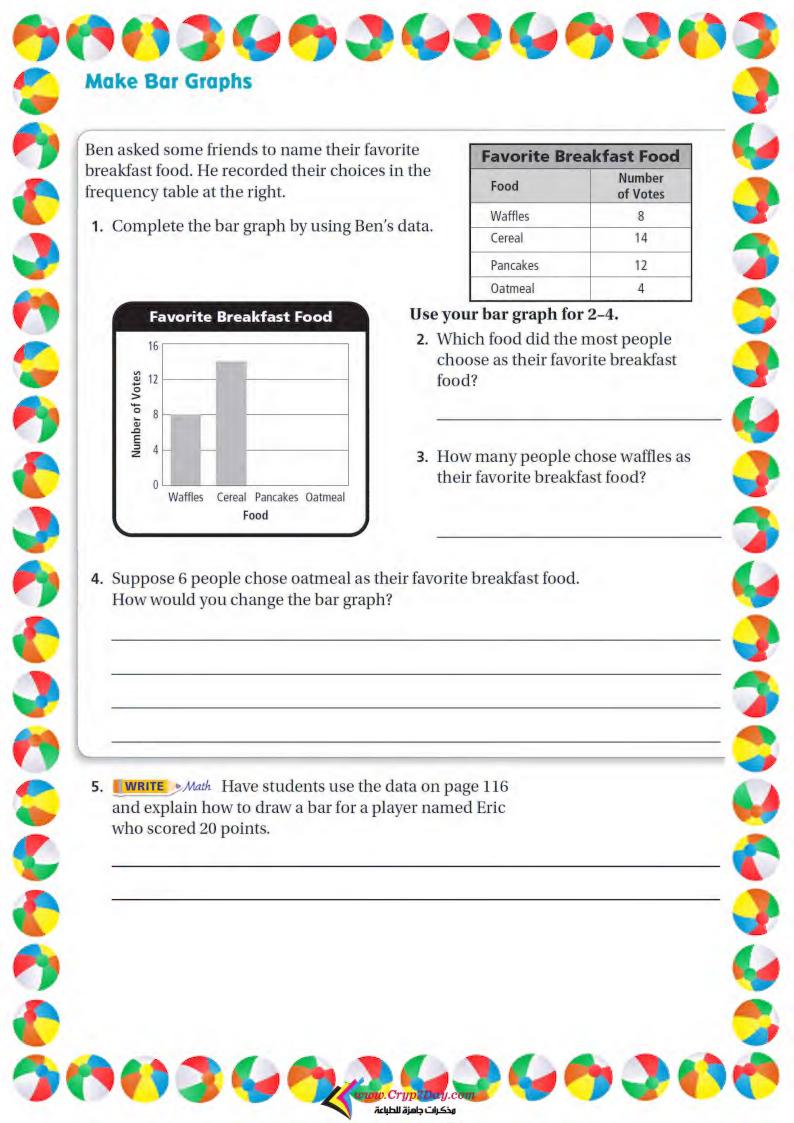
- **2.** How many more students like pepperoni than cheese?
- 3. Find the total number of students.
- **4.** Use the line plot. What is the difference between the most and least number of students in a classroom?

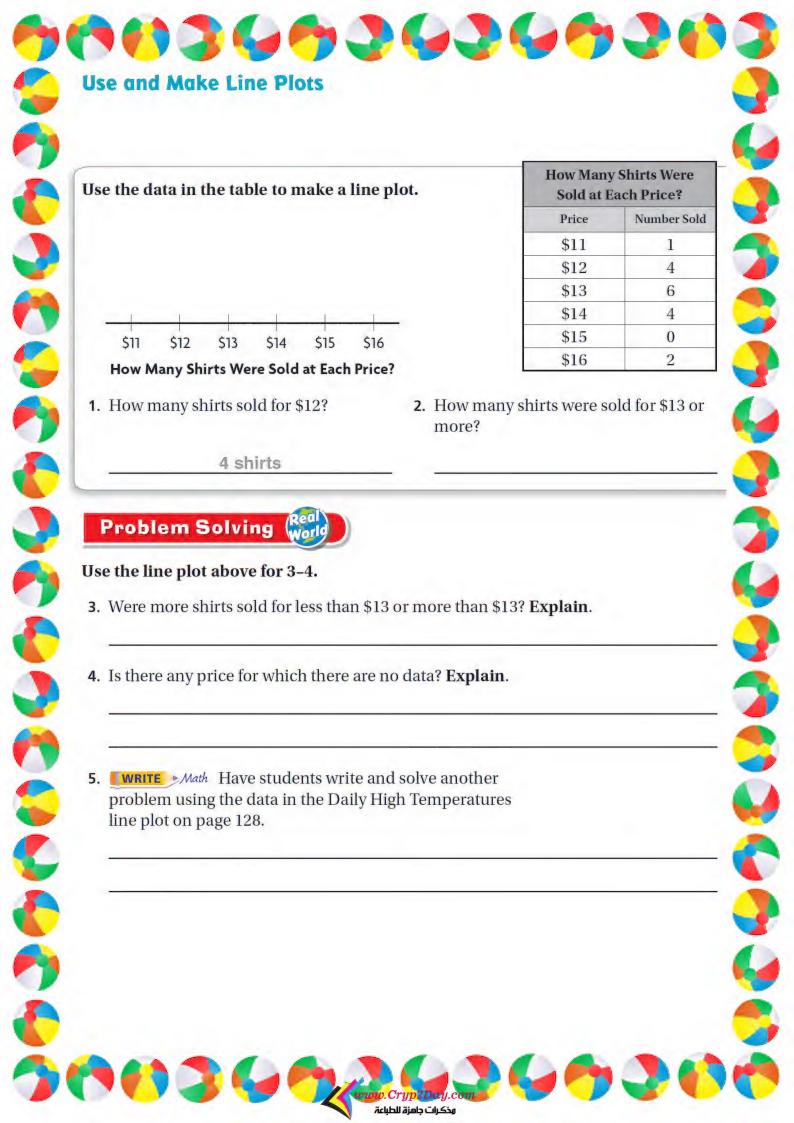


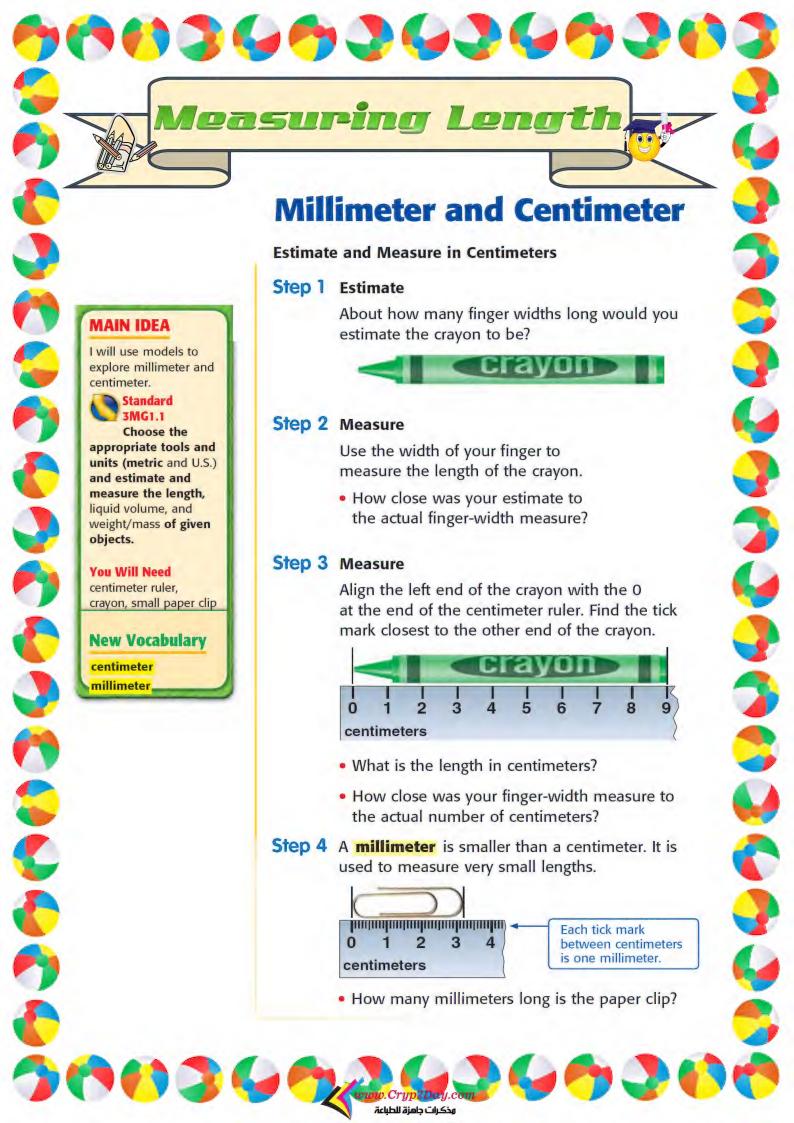
Favorite Place to Read a Book		
Place	Students	
Bed	1111111	
Outside	1(1	
School	111.111	
Library	1(1)	

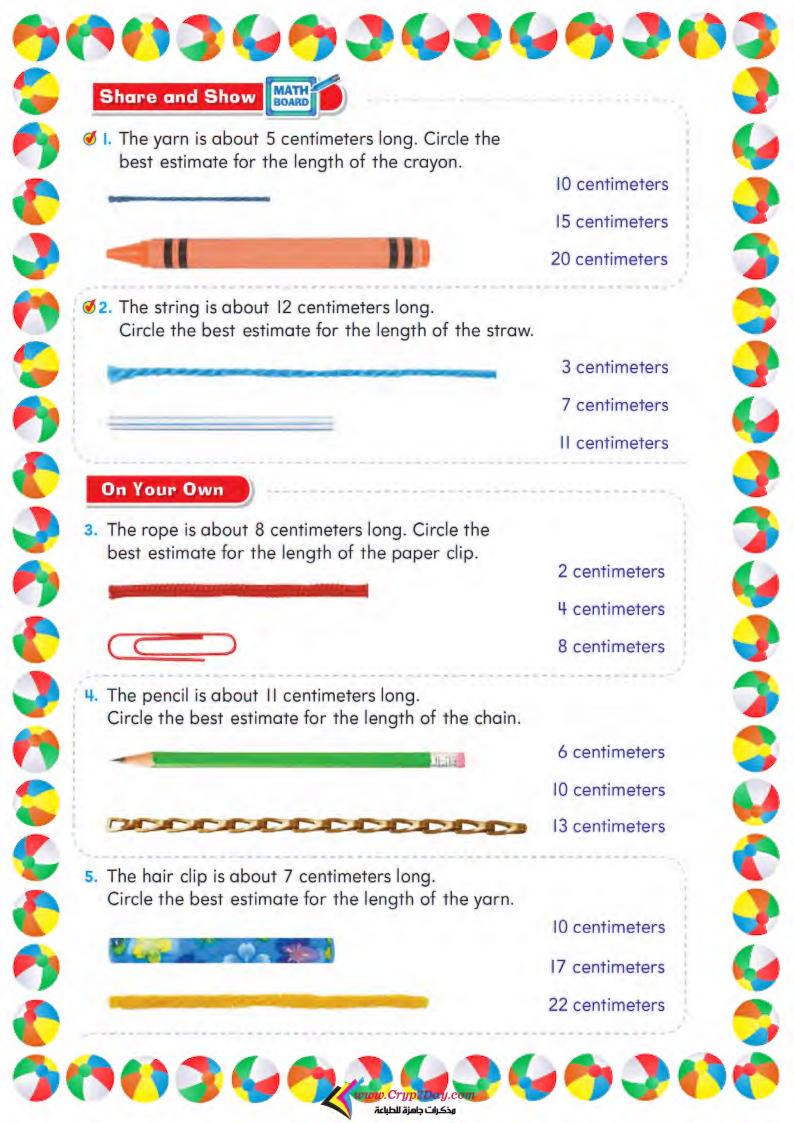


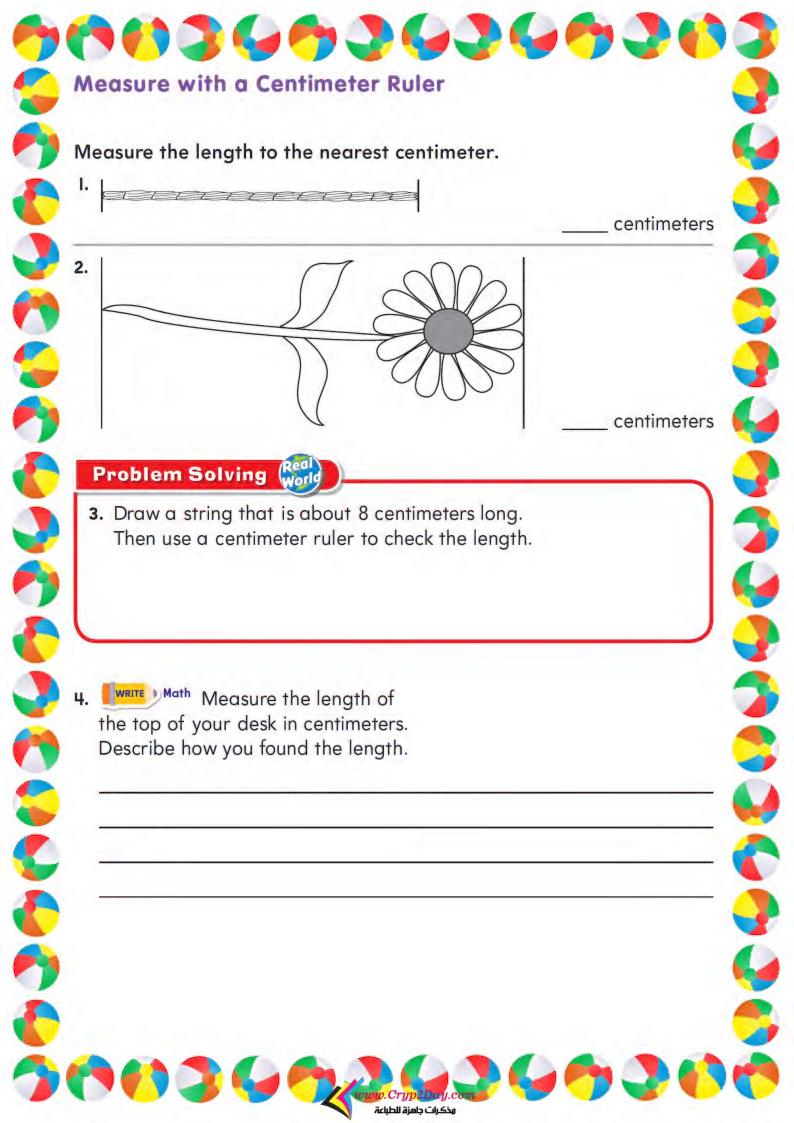


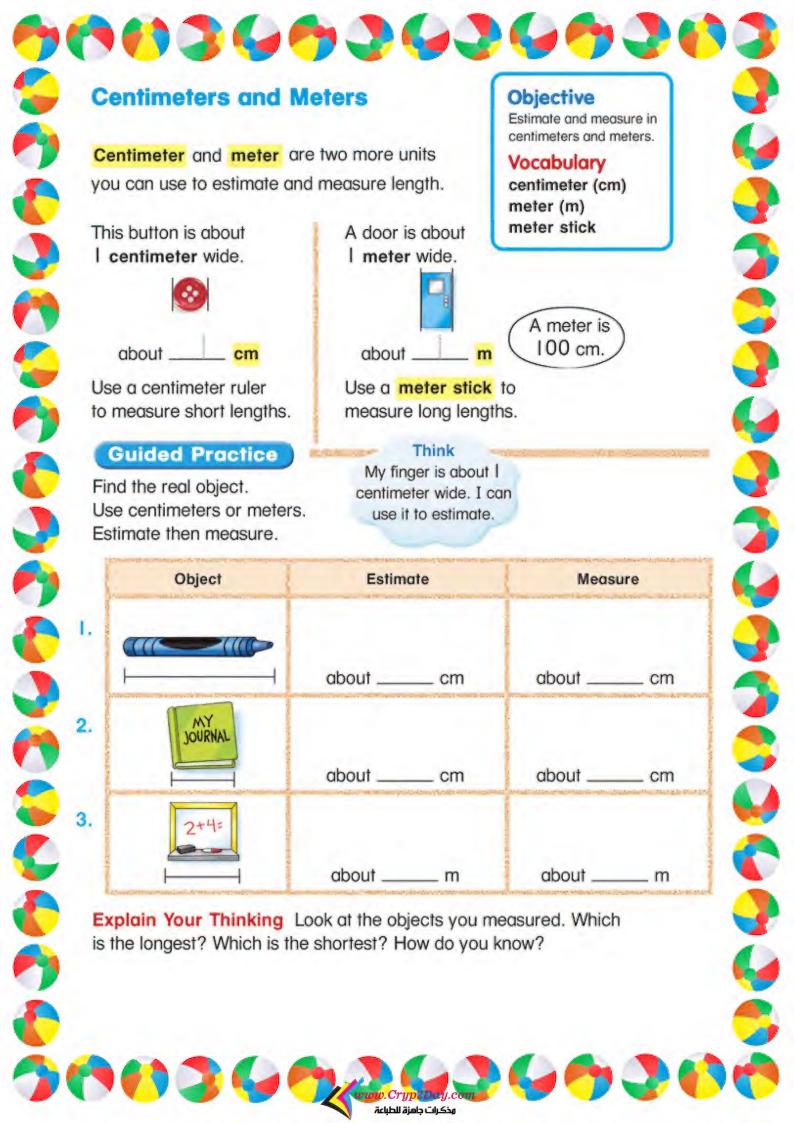


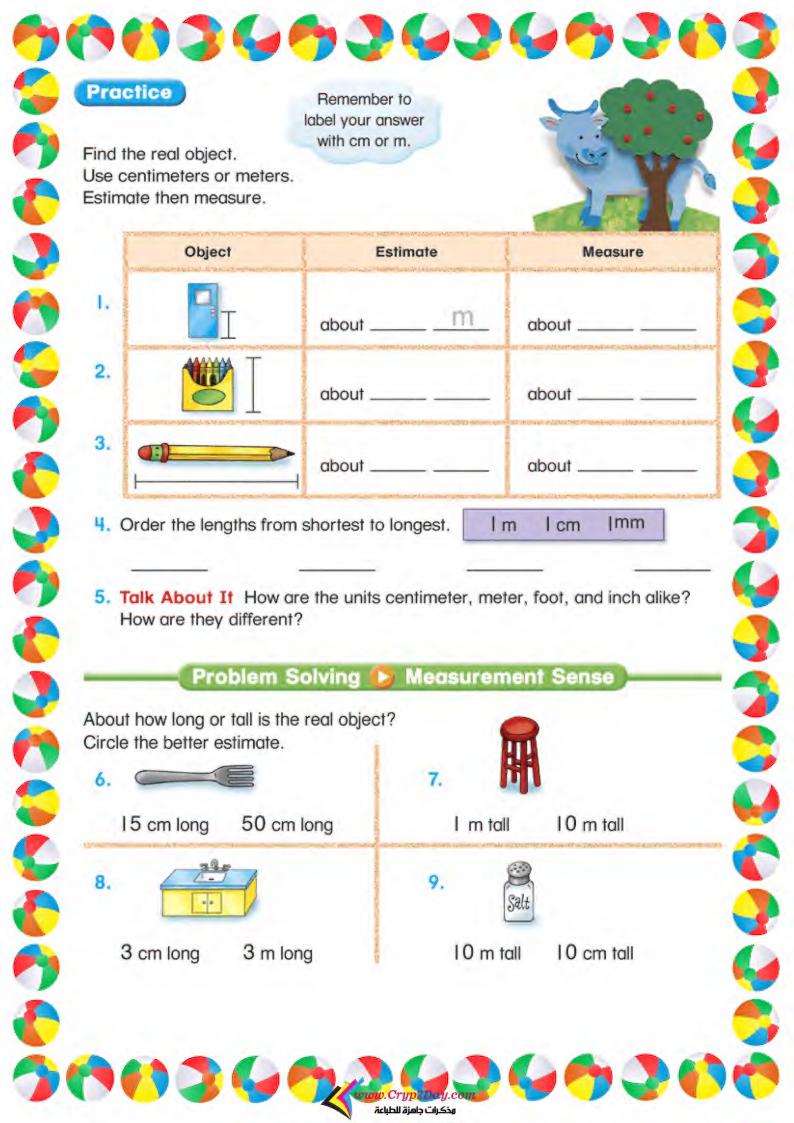


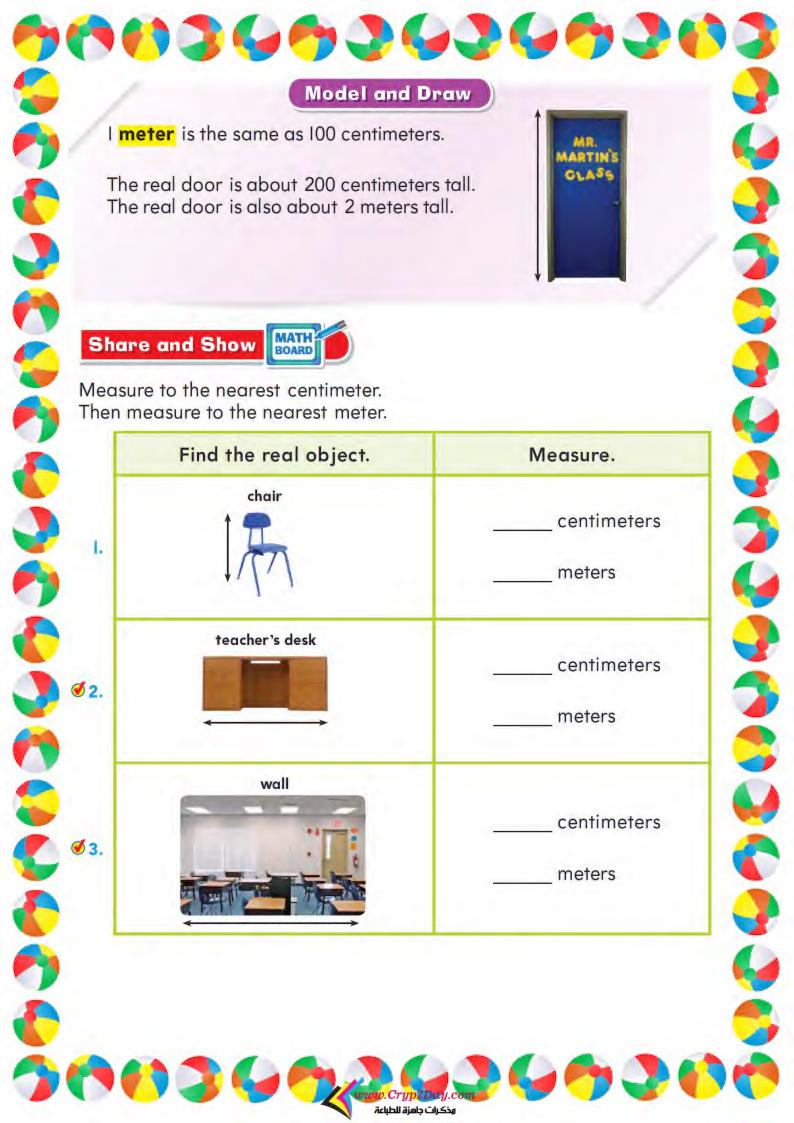


















Objective Identify values of digits in numbers to 9,999.

Learn About It

When the Space Shuttle returns to Earth, it gets very hot. That is why the shuttle is made of materials that can stand temperatures of more than 2,390°F!



A place-value chart can help explain what this number means.

thousands	hundreds	tens	ones 0	
2	3	9		

The value of The value of The value of The value of the 2 is 2,000. the 3 is 300. the 9 is 90. the 0 is 0.

There are different ways to write 2,390.

Different Ways to Write a Number			
You can use standard form.	2,390		
You can use expanded form.	2,000 + 300 + 90		
You can use word form.	two thousand, three hundred ninety		

Guided Practice

Write each number in two other ways. Use standard form, expanded form, and word form.

- 1. 1,000 + 700 + 8 2. seven thousand, thirty-six
- 3. 2,039

ソウシウシウシウシシシウ

4. four thousand, one hundred five

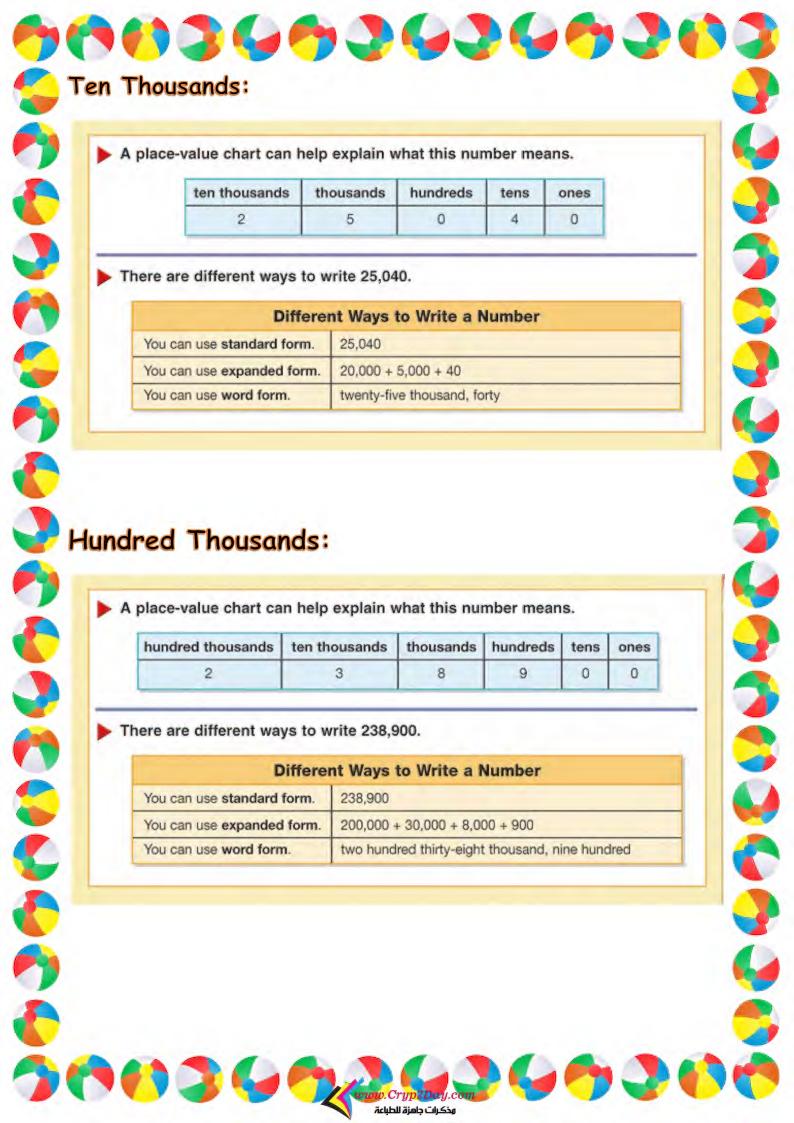
Ask Yourself

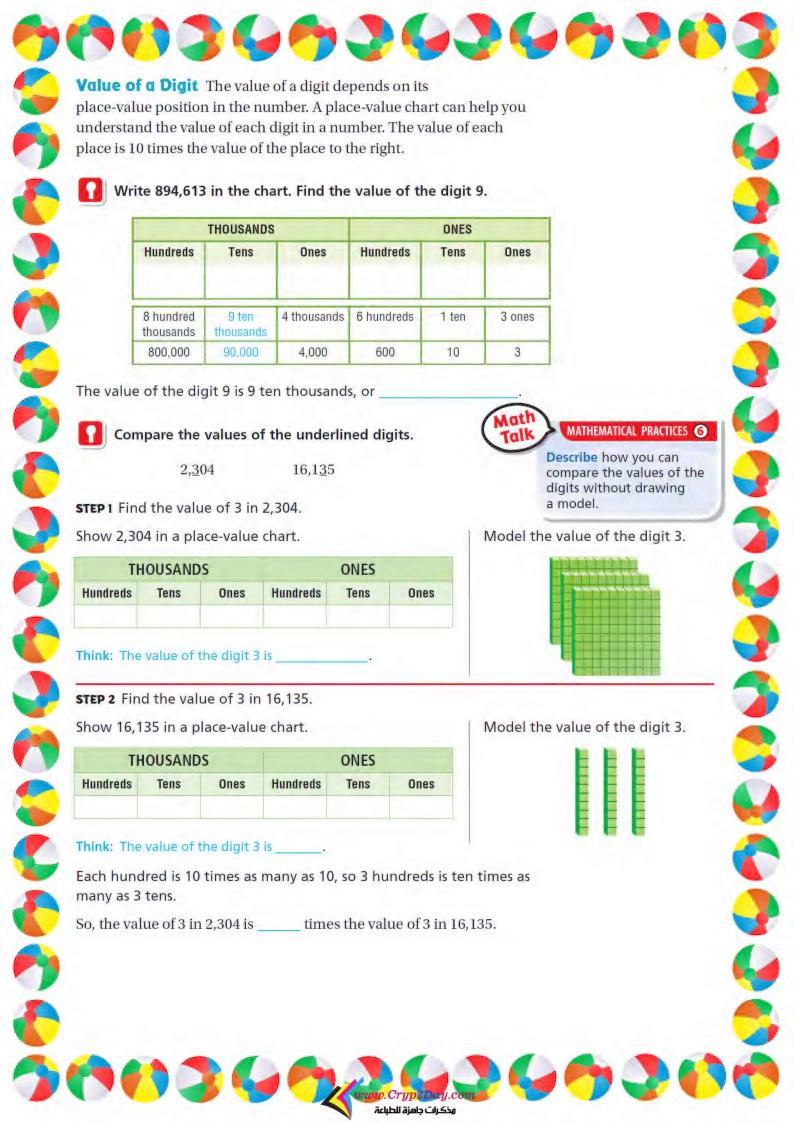
4000000000000

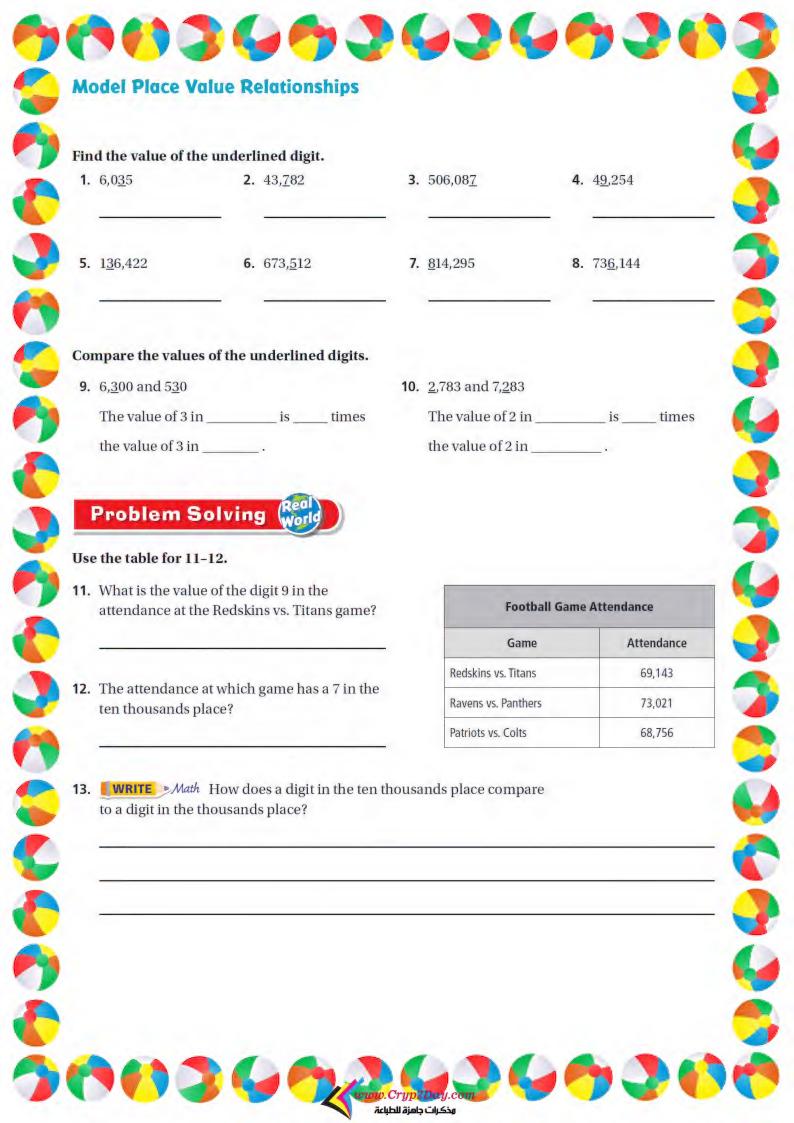
- What is the value of each digit in the number?
- Do any places have zeros?

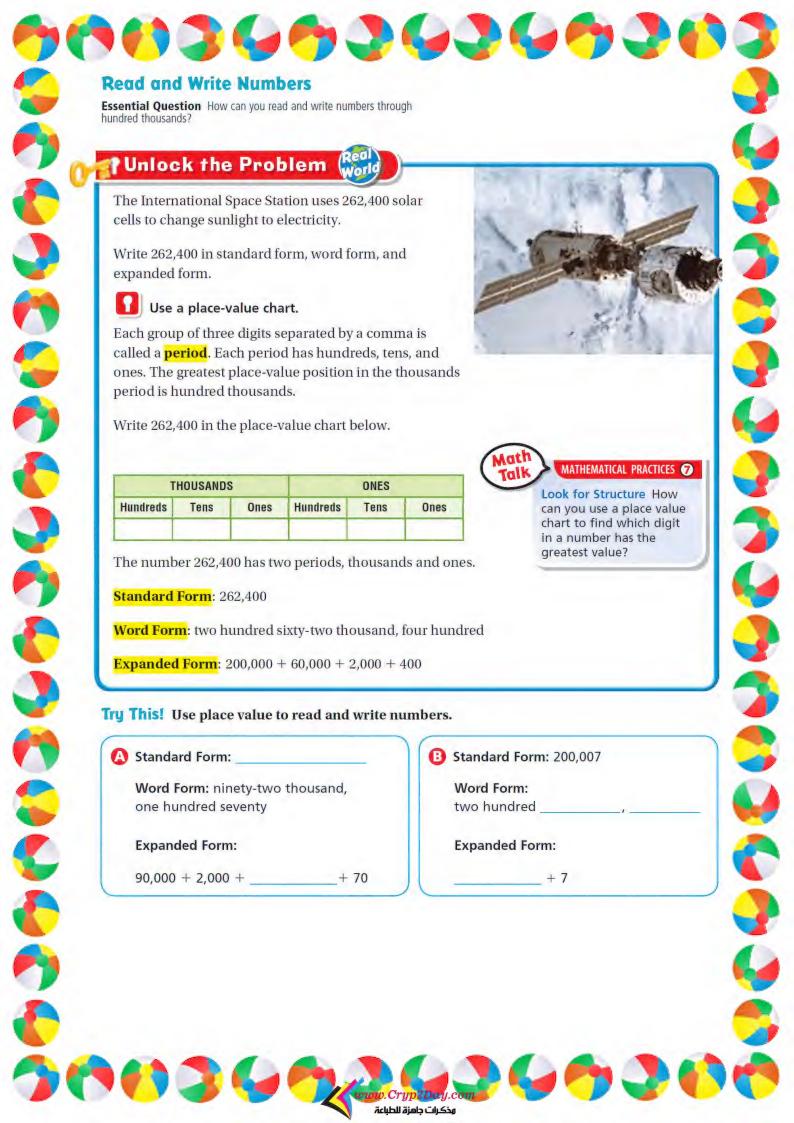
Explain Your Thinking In what ways are 2,390 and 3,290 similar? In what ways are they different?



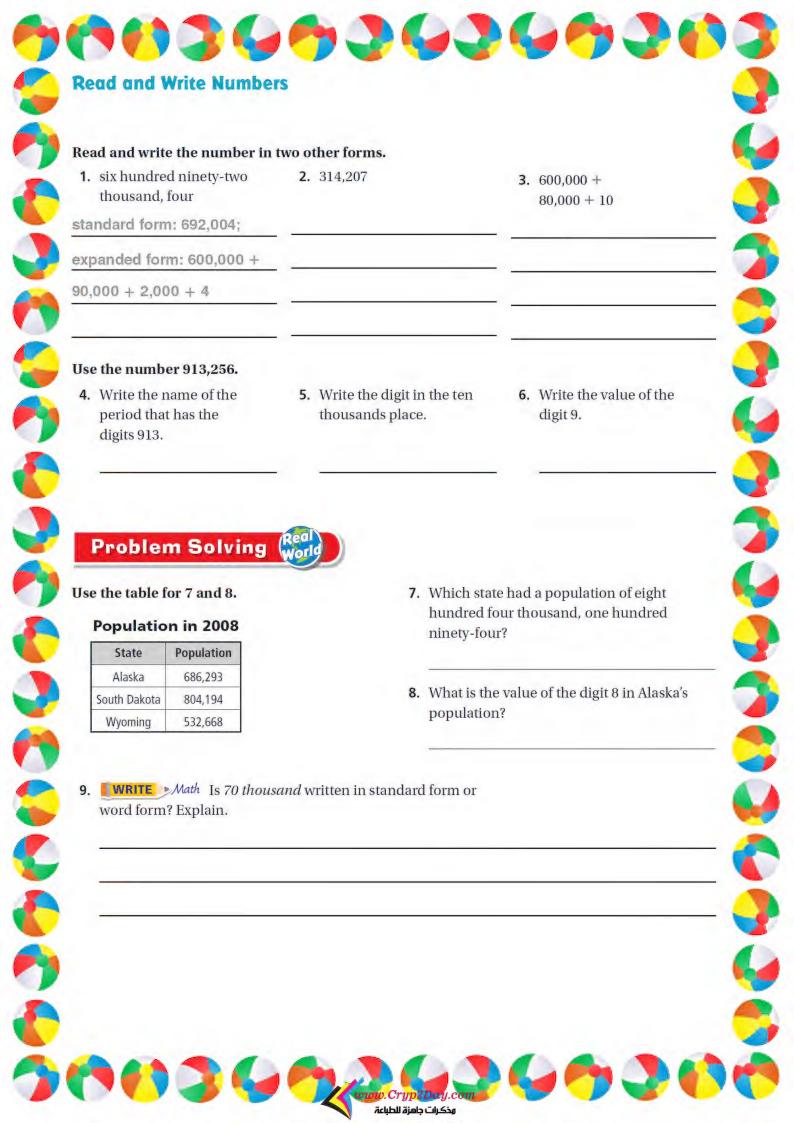


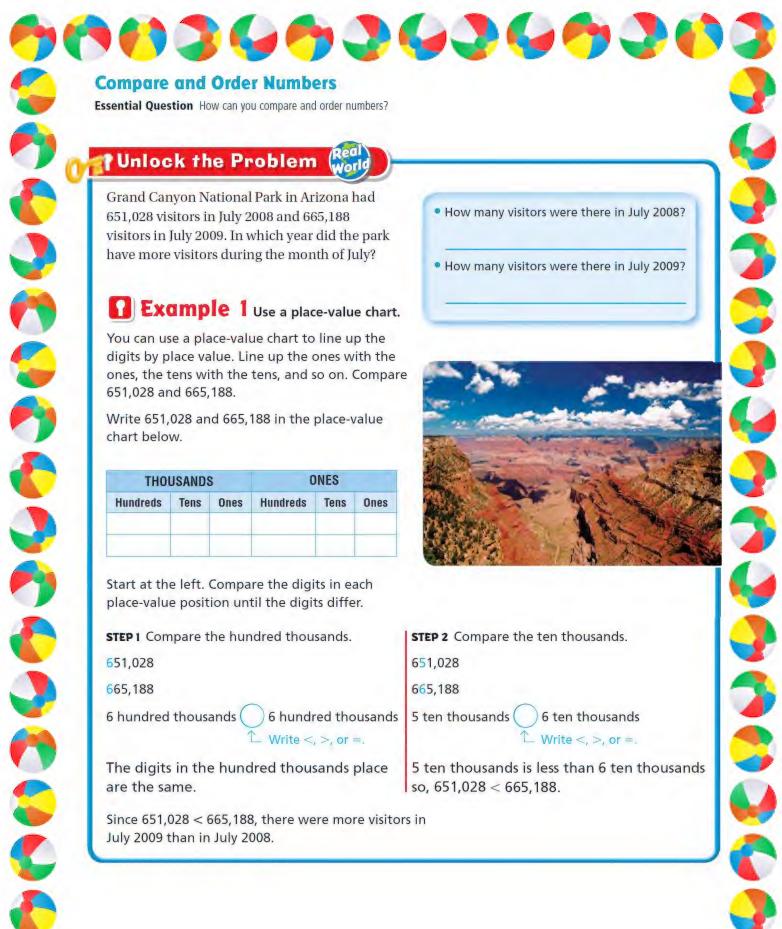












THOUSANDS		ONES			
Hundreds	Tens	Ones	Hundreds	Tens	Ones

Start at the left. Compare the digits in each place-value position until the digits differ.

STEP 1 Compare the hundred thousands.

651,028

665,188

6 hundred thousands (6 hundred thousands

riangle Write <, >, or =.

The digits in the hundred thousands place are the same.



STEP 2 Compare the ten thousands.

651,028

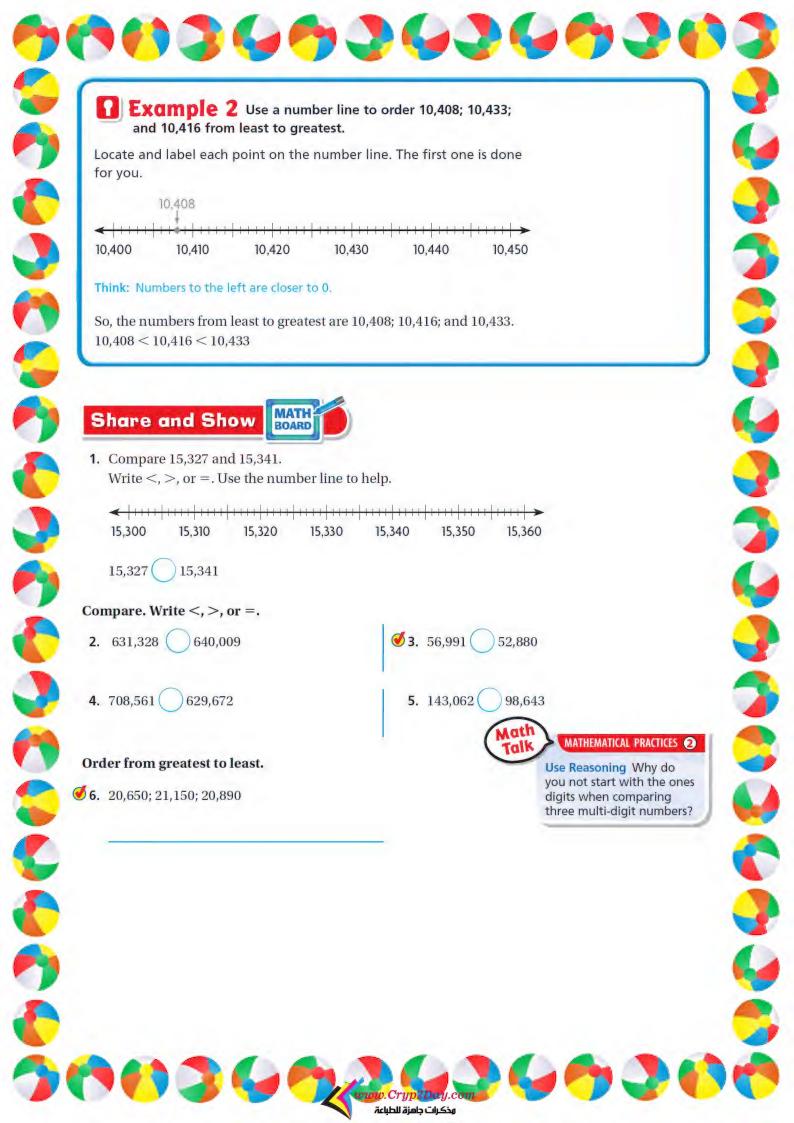
665,188

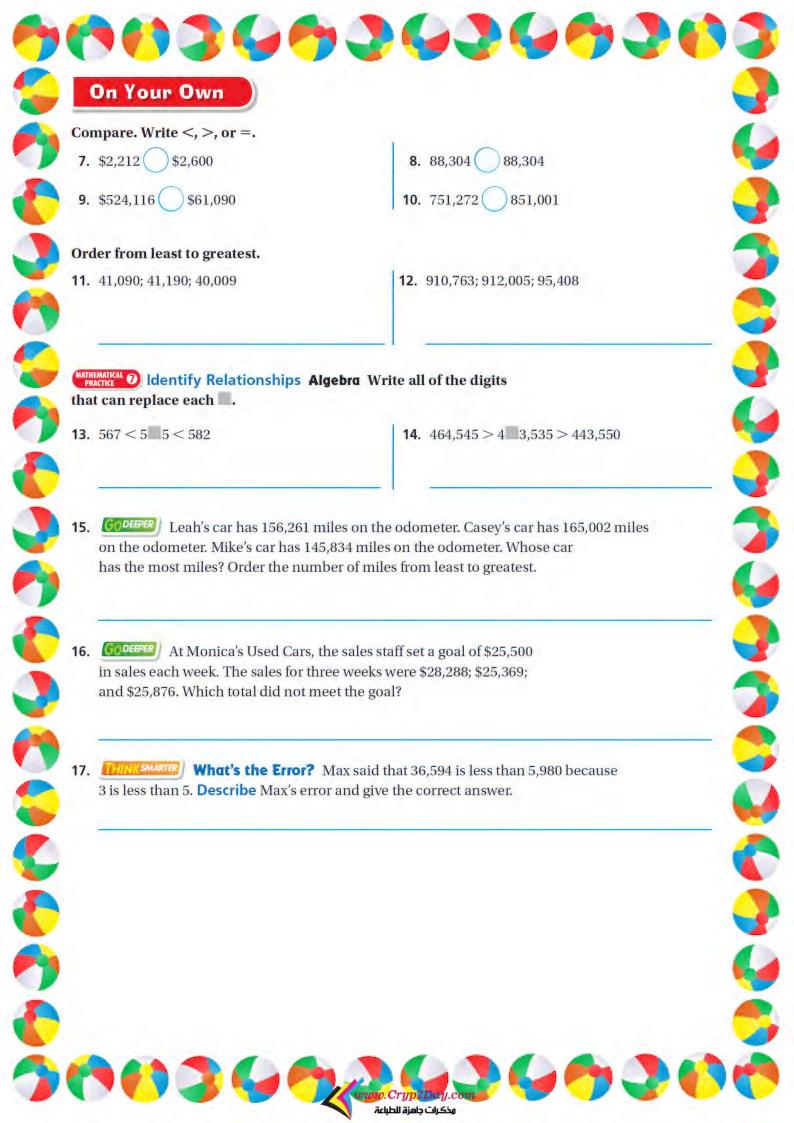
5 ten thousands 6 ten thousands

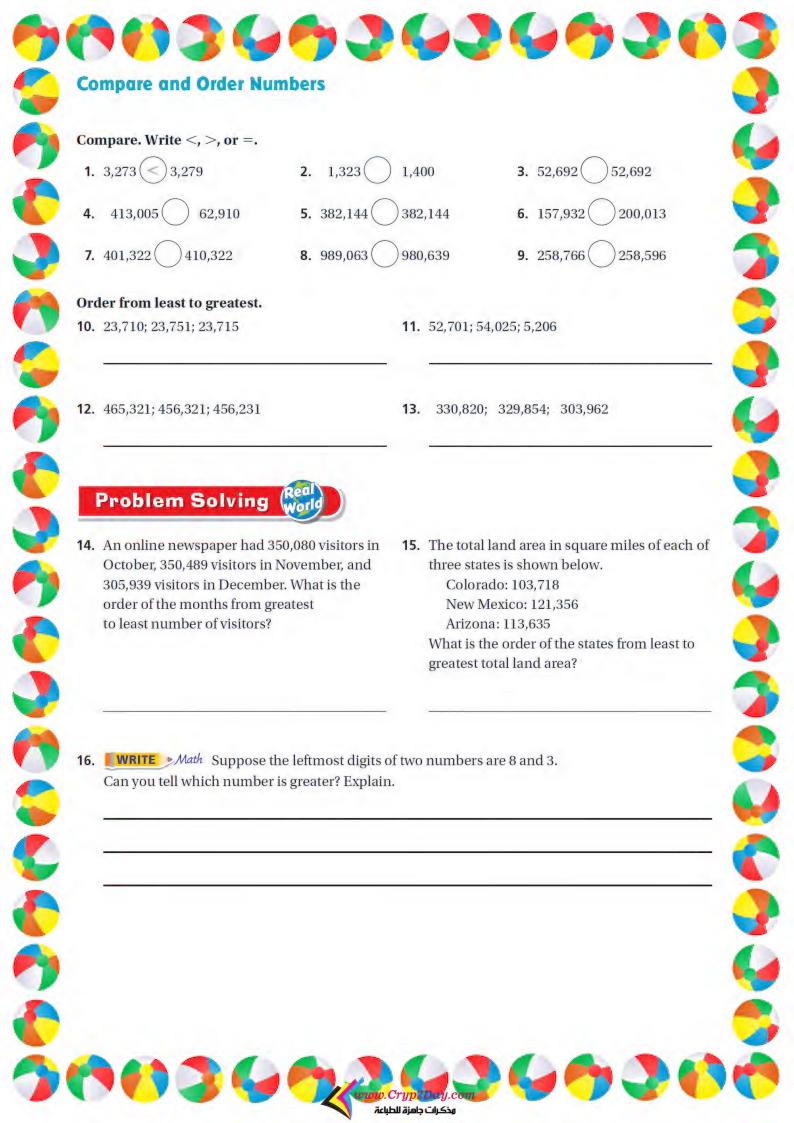
 \bigcap Write <, >, or =.

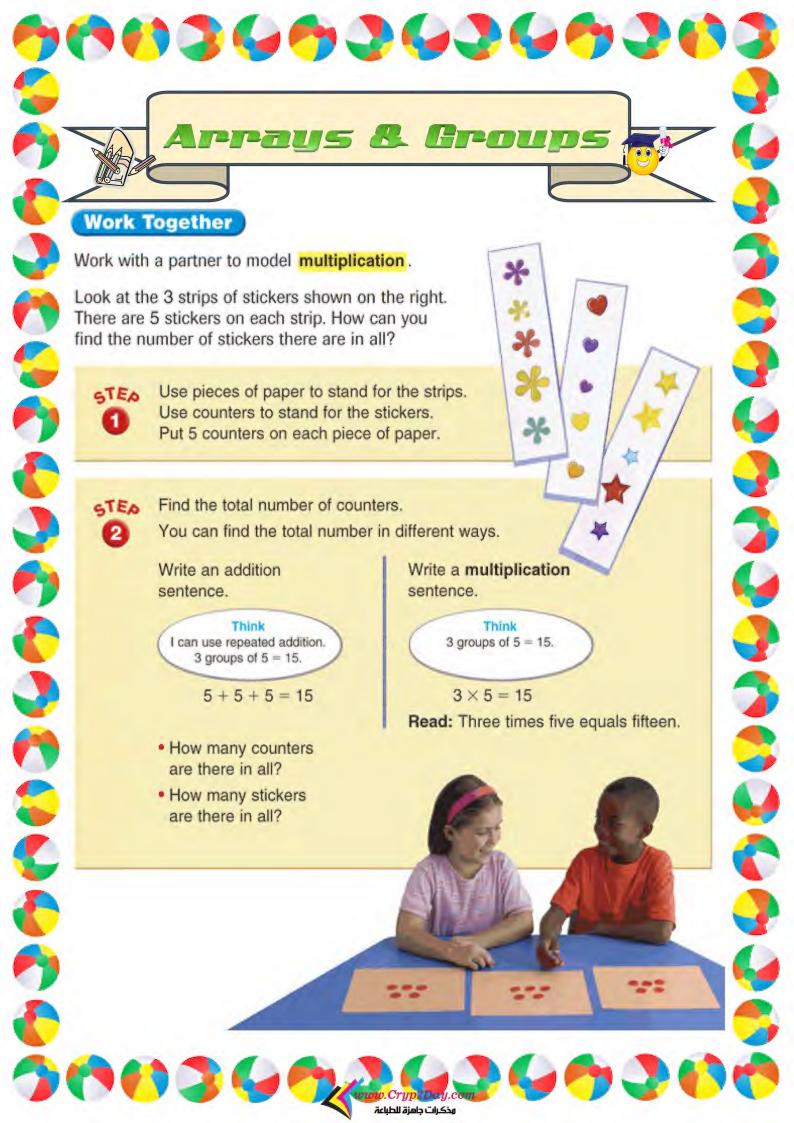
5 ten thousands is less than 6 ten thousands so, 651,028 < 665,188.

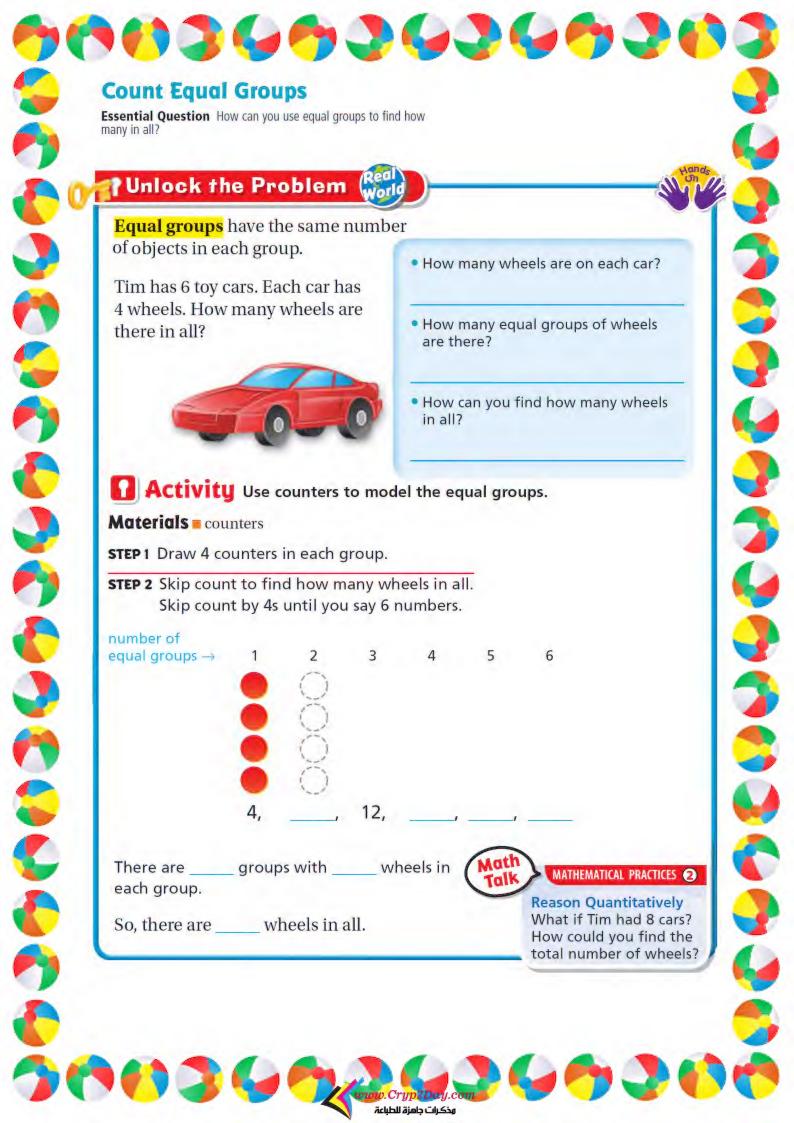
Since 651,028 < 665,188, there were more visitors in July 2009 than in July 2008.

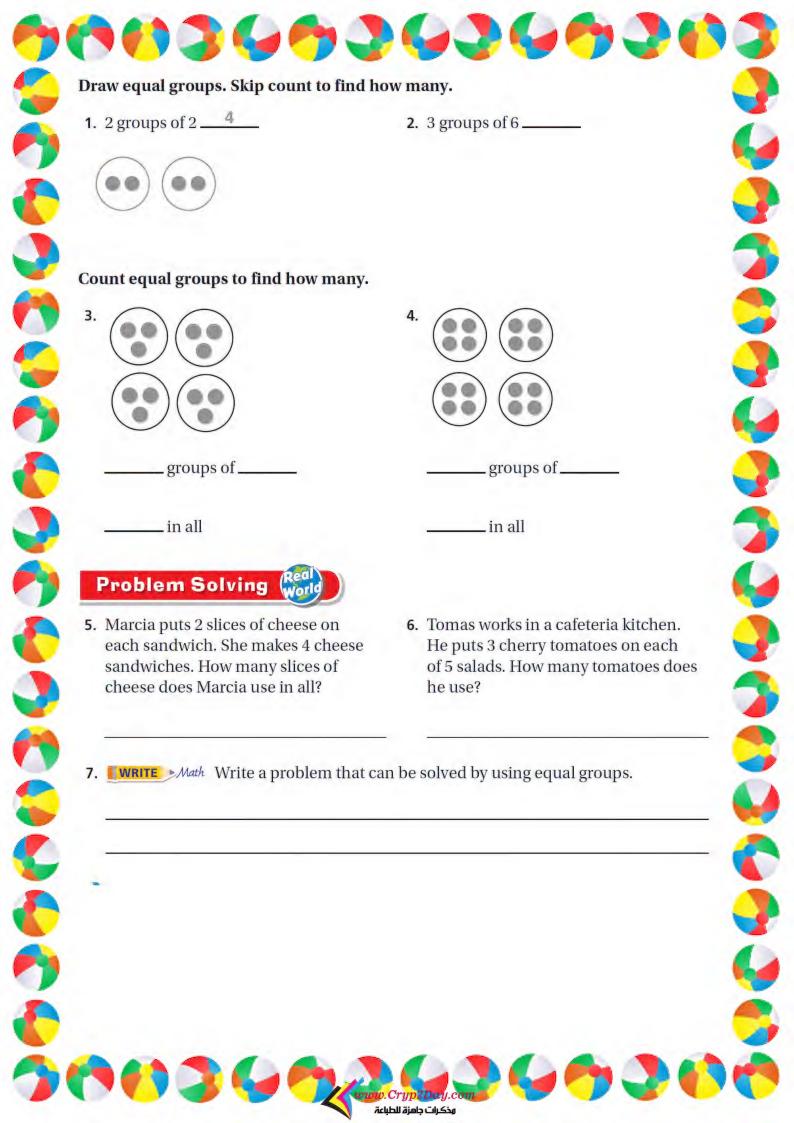


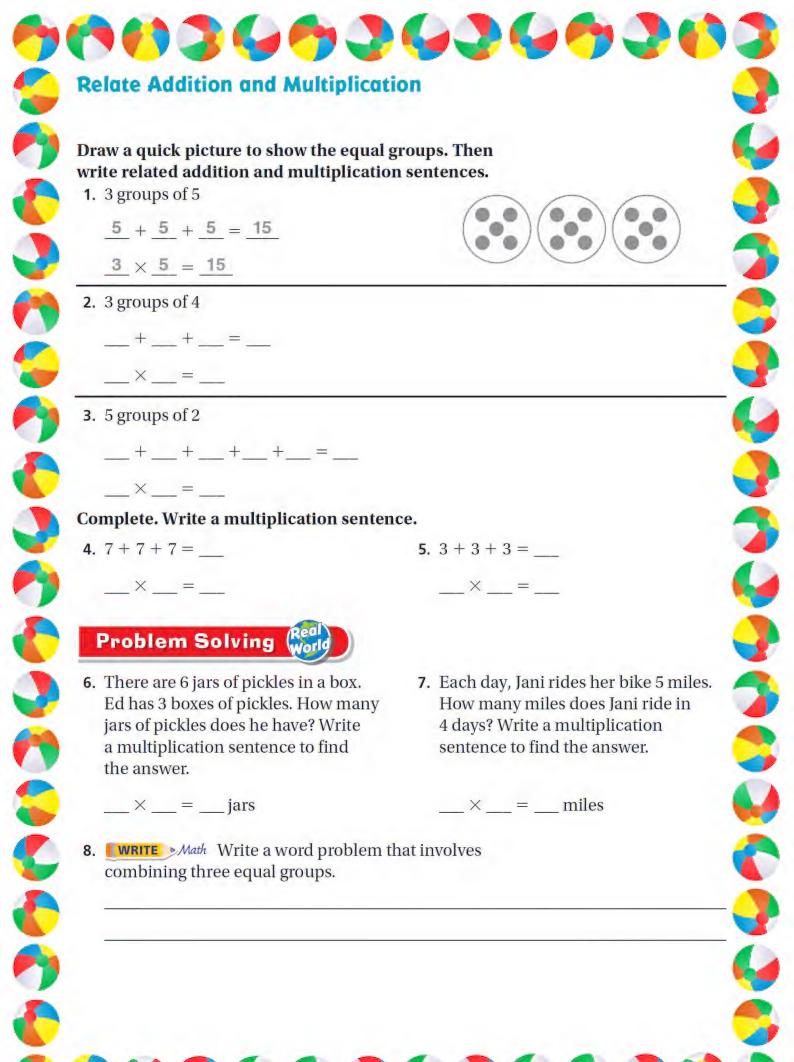


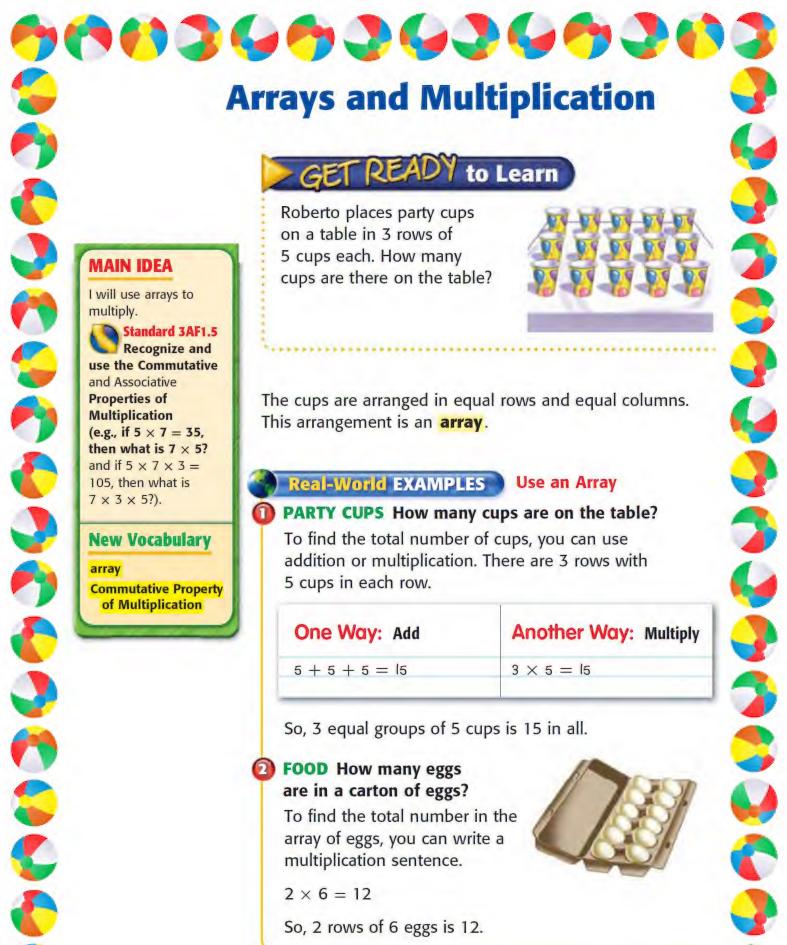












MAIN IDEA

I will use arrays to multiply.

Standard 3AF1.5 Recognize and use the Commutative and Associative **Properties of** Multiplication (e.g., if $5 \times 7 = 35$, then what is 7×5 ? and if $5 \times 7 \times 3 =$ 105, then what is $7 \times 3 \times 5$?).

New Vocabulary

array

Commutative Property of Multiplication

5 cups each. How many cups are there on the table?



The cups are arranged in equal rows and equal columns. This arrangement is an **array**.

Real-World EXAMPLES

Use an Array

PARTY CUPS How many cups are on the table?

To find the total number of cups, you can use addition or multiplication. There are 3 rows with 5 cups in each row.

One Way: Add	Another Way: Multiply
5+5+5=15	$3 \times 5 = 15$

So, 3 equal groups of 5 cups is 15 in all.

FOOD How many eggs are in a carton of eggs?

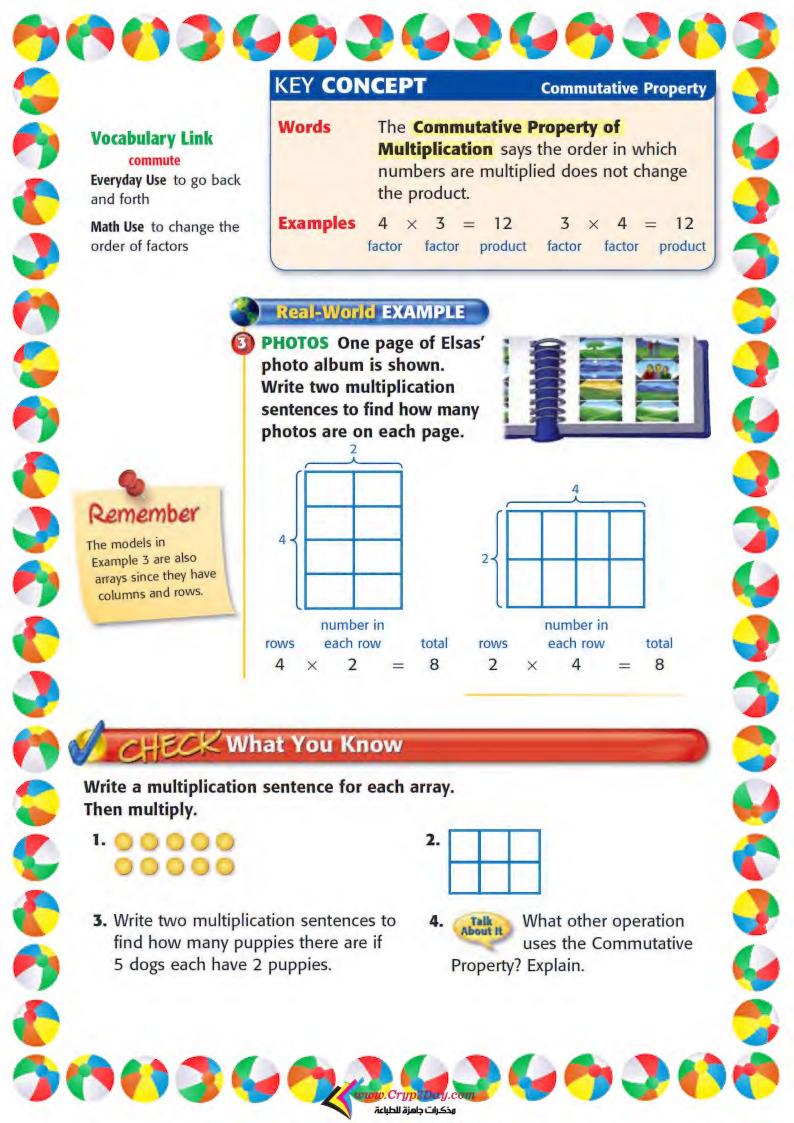
> To find the total number in the array of eggs, you can write a multiplication sentence.

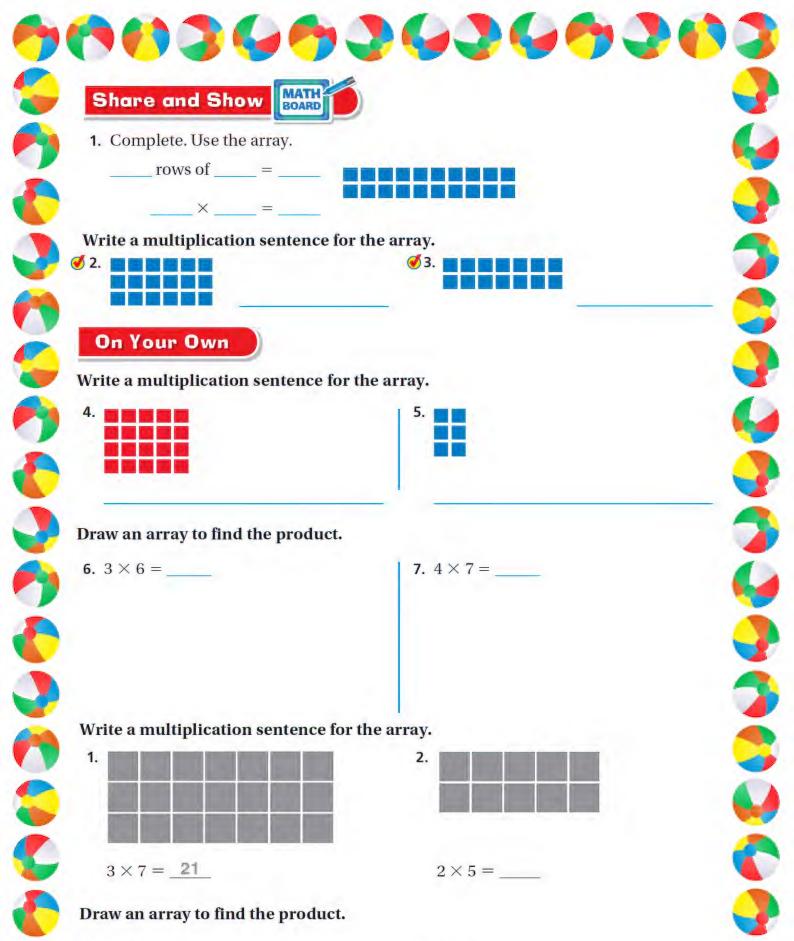


$$2 \times 6 = 12$$

So, 2 rows of 6 eggs is 12.





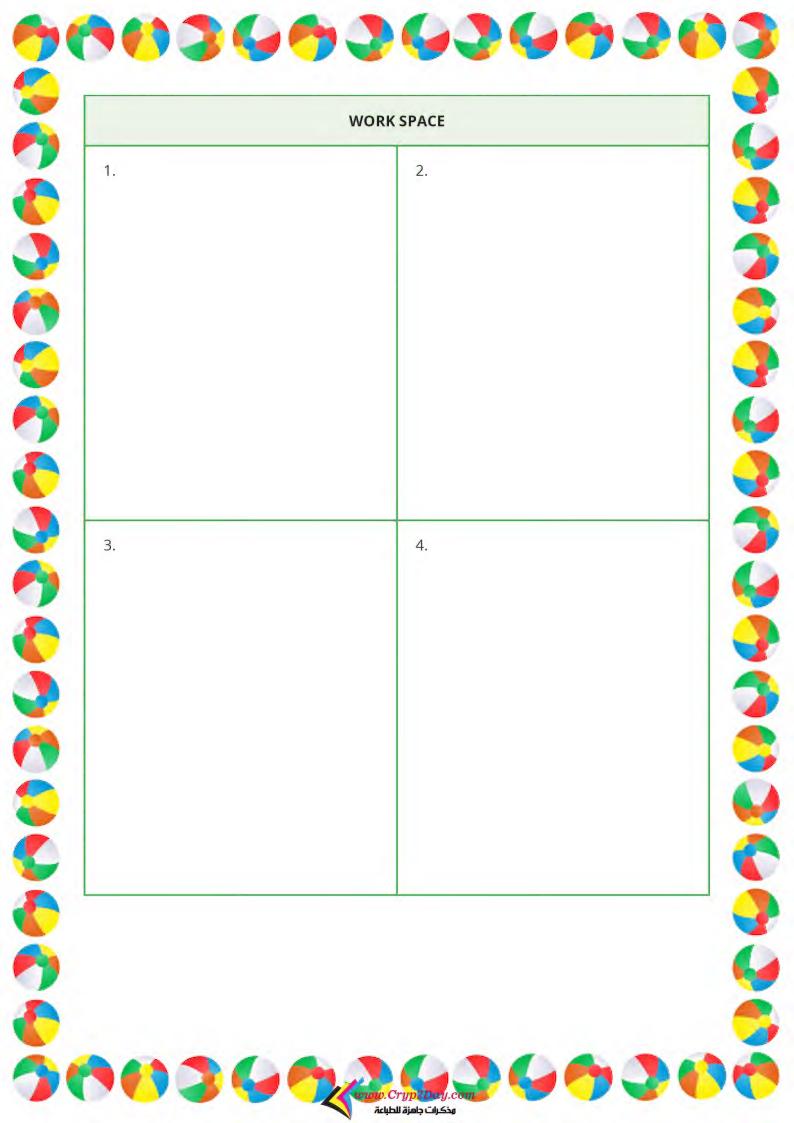


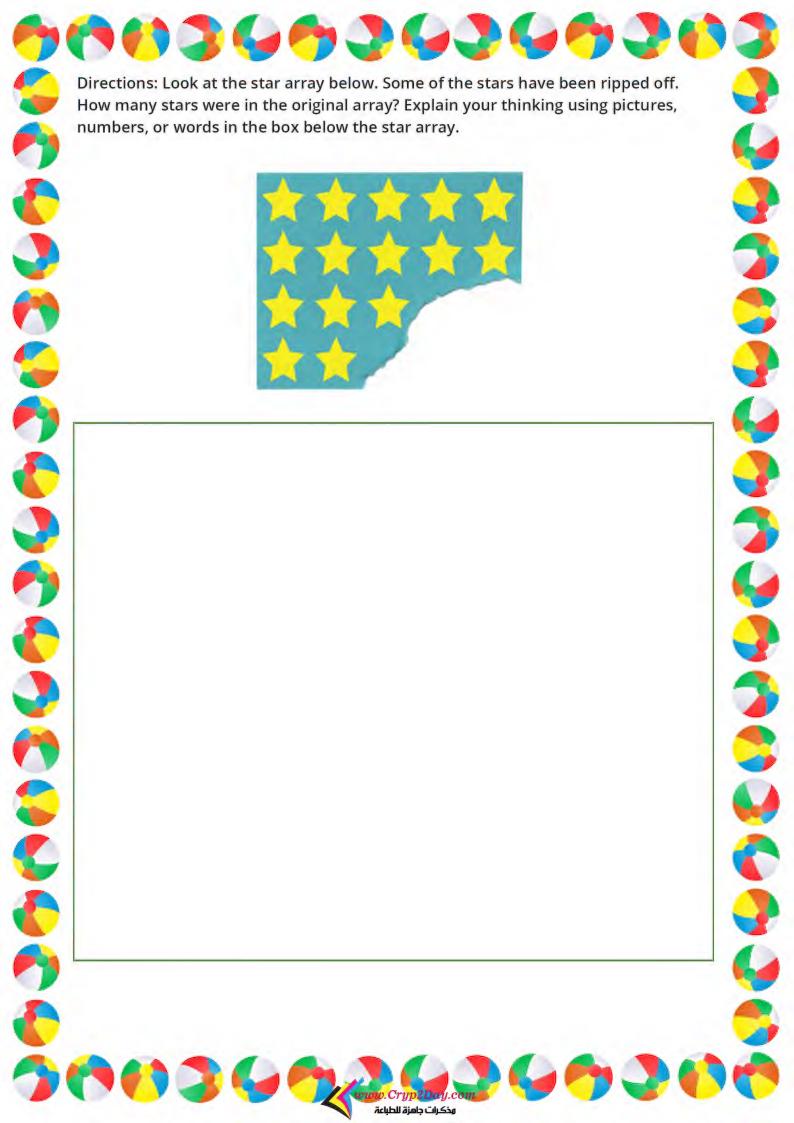
3.
$$4 \times 2 =$$

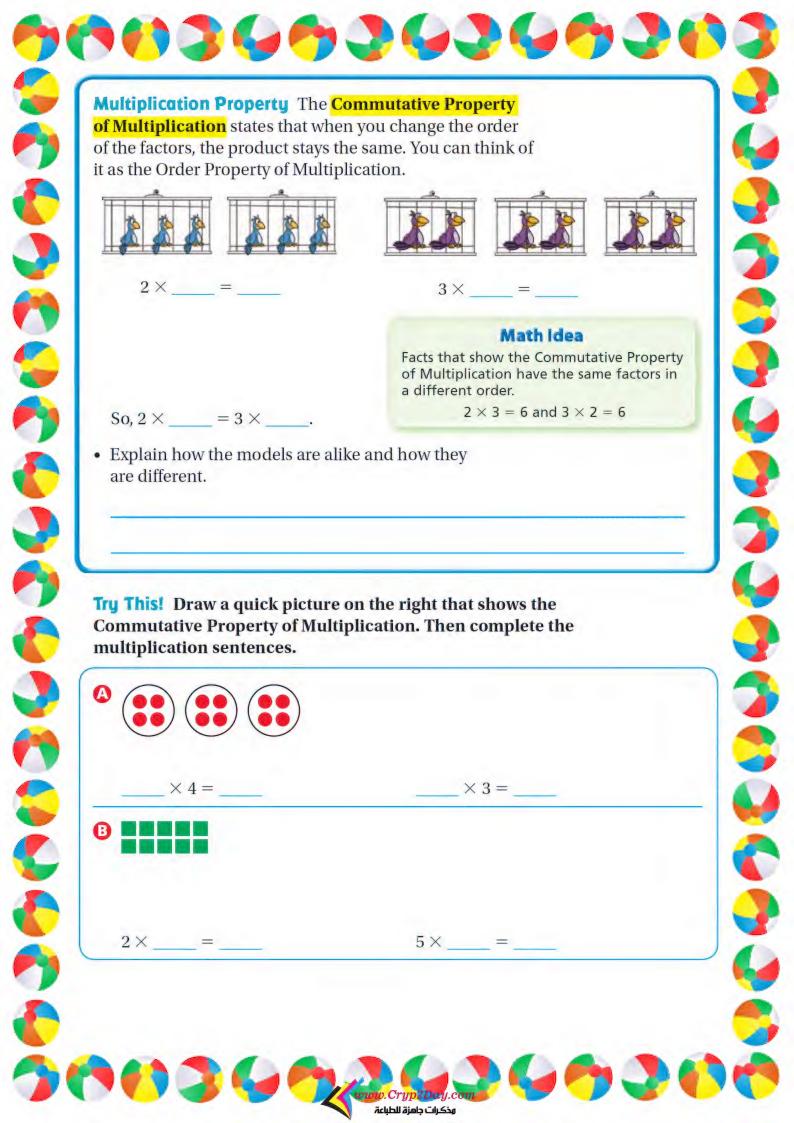
4.
$$2 \times 8 =$$

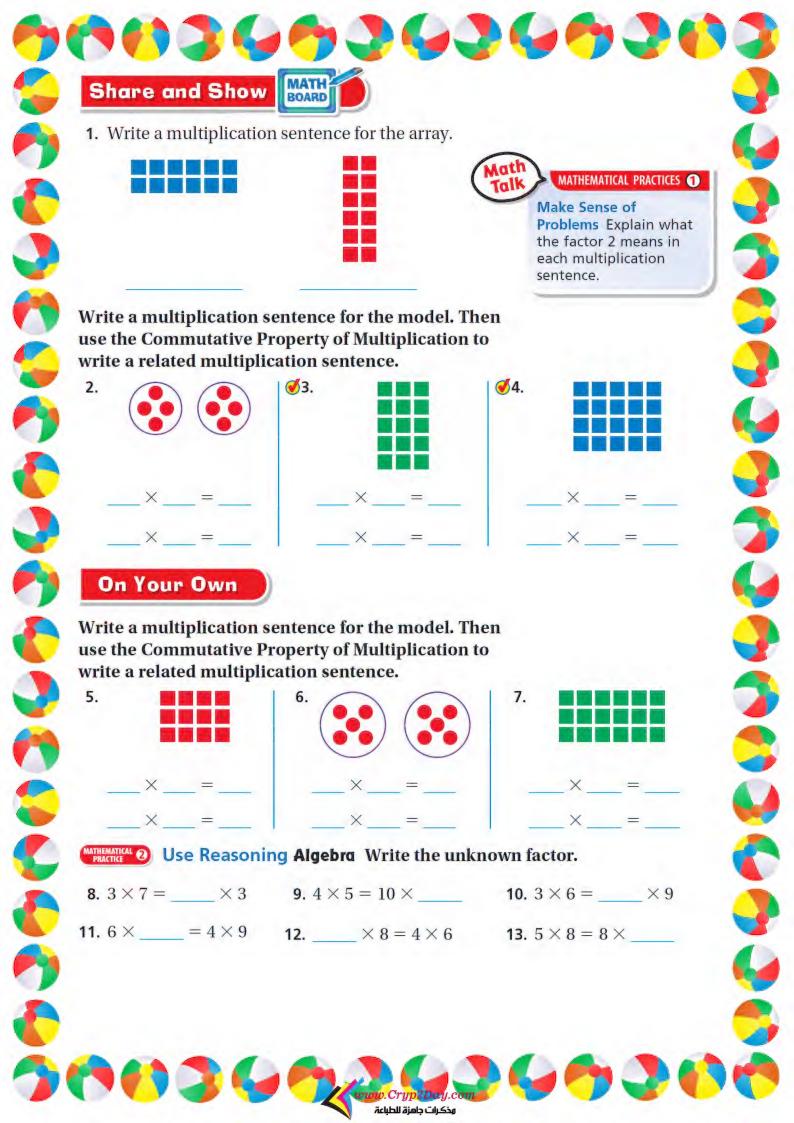


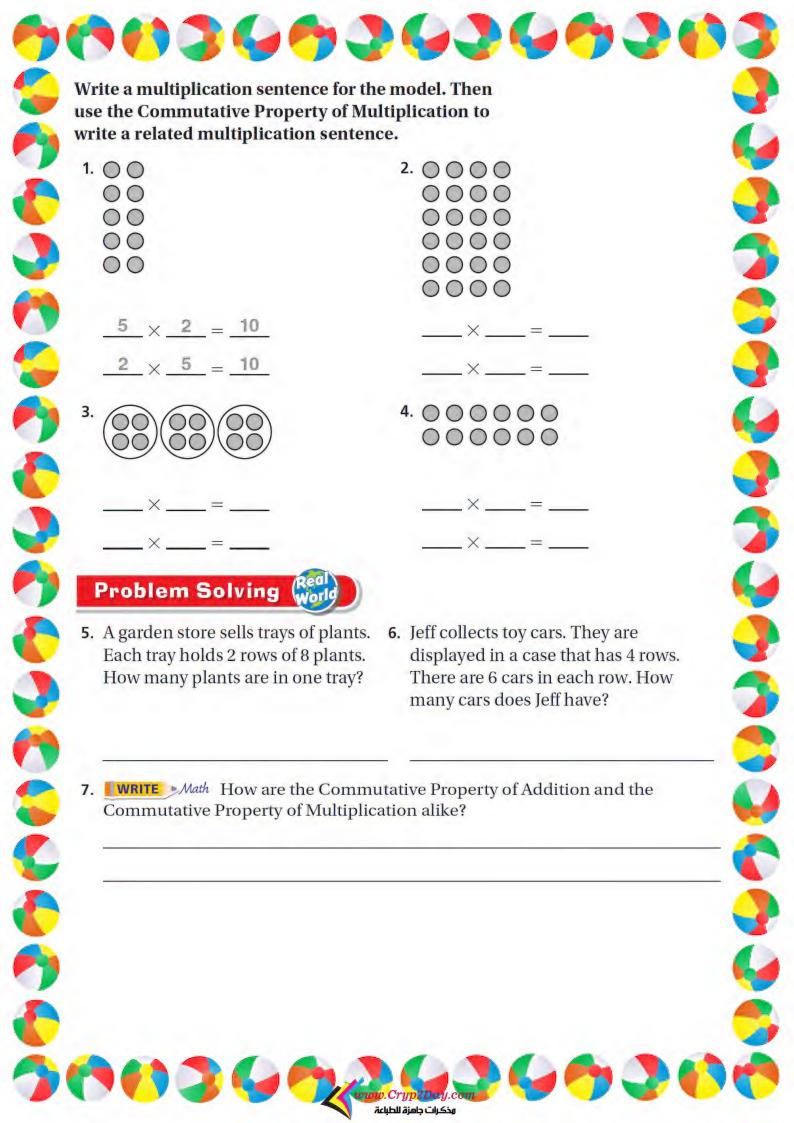


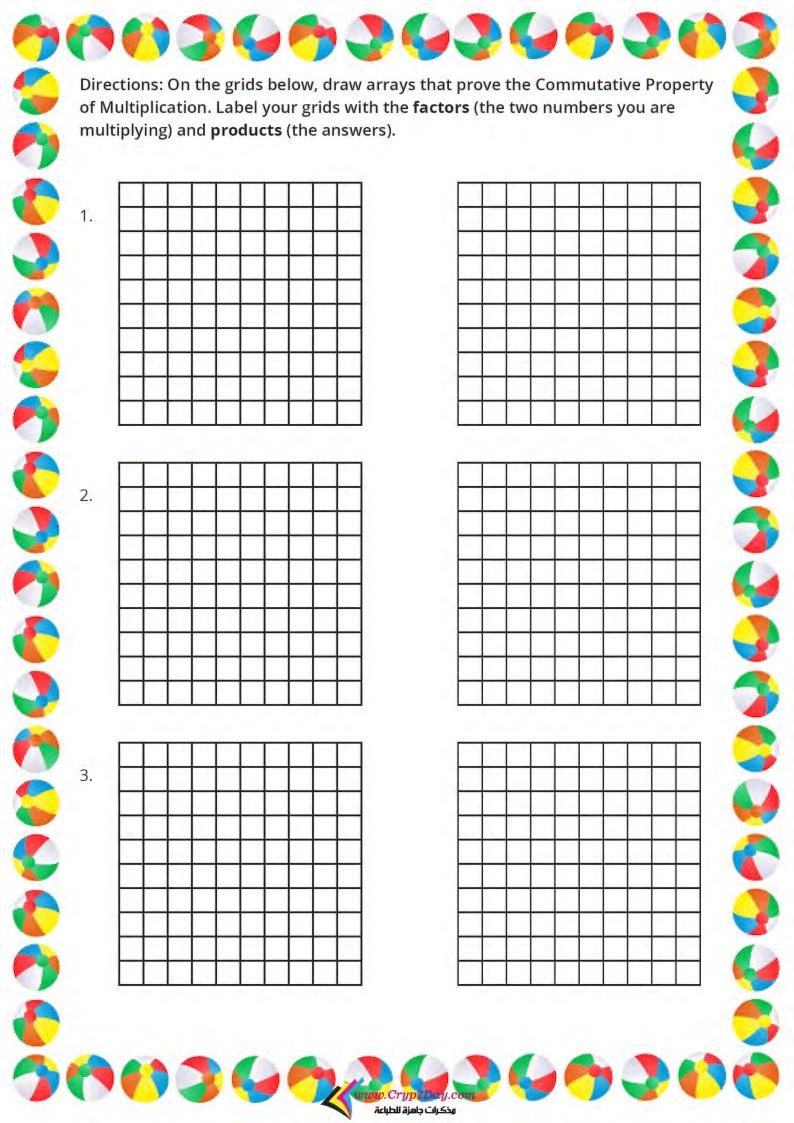






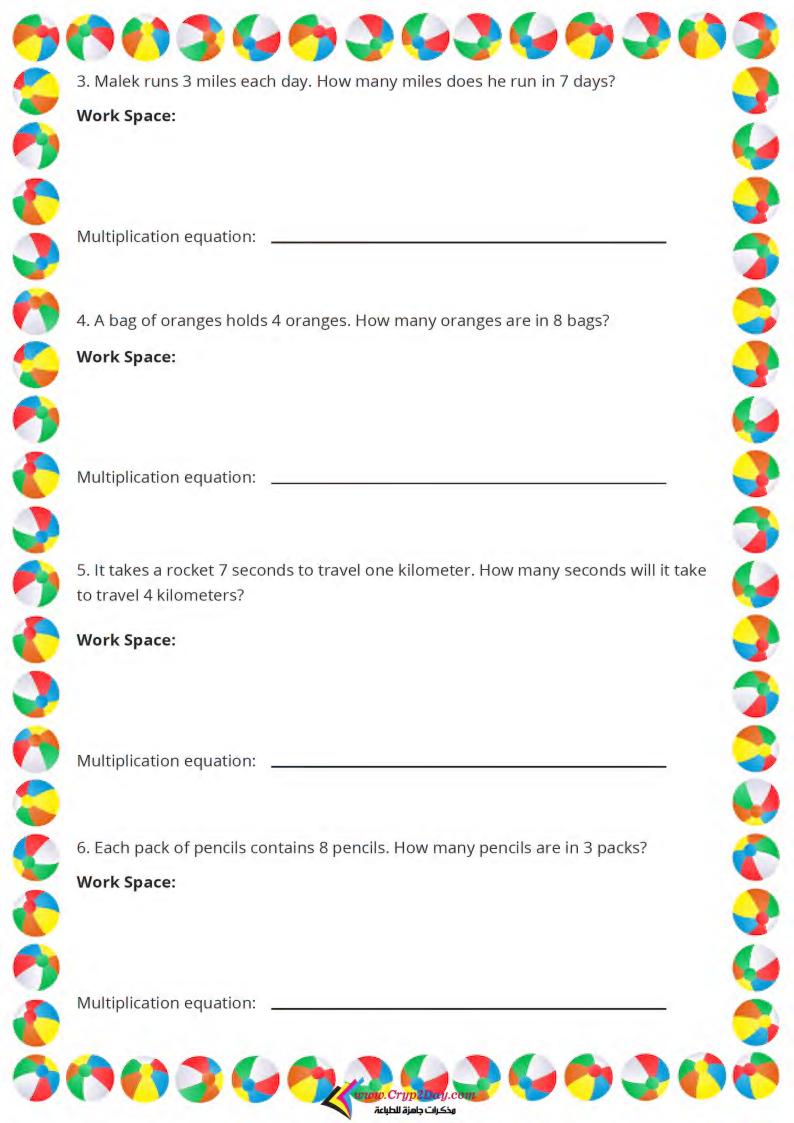


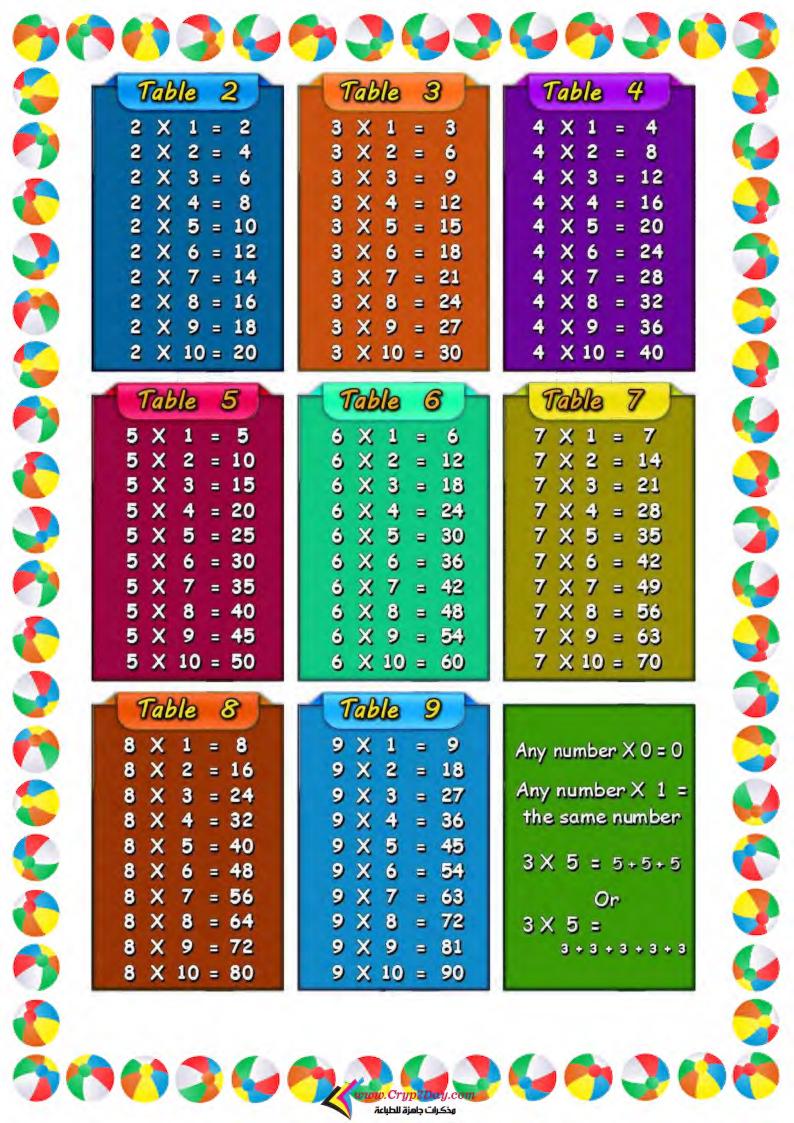


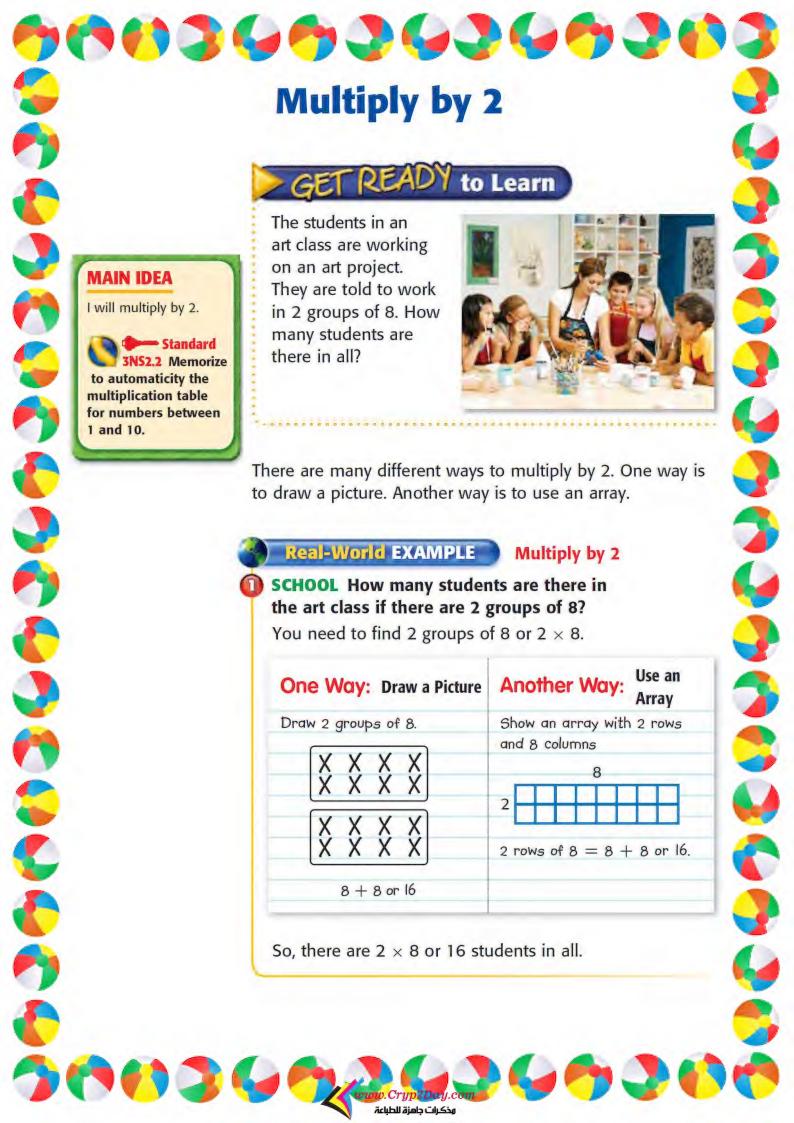


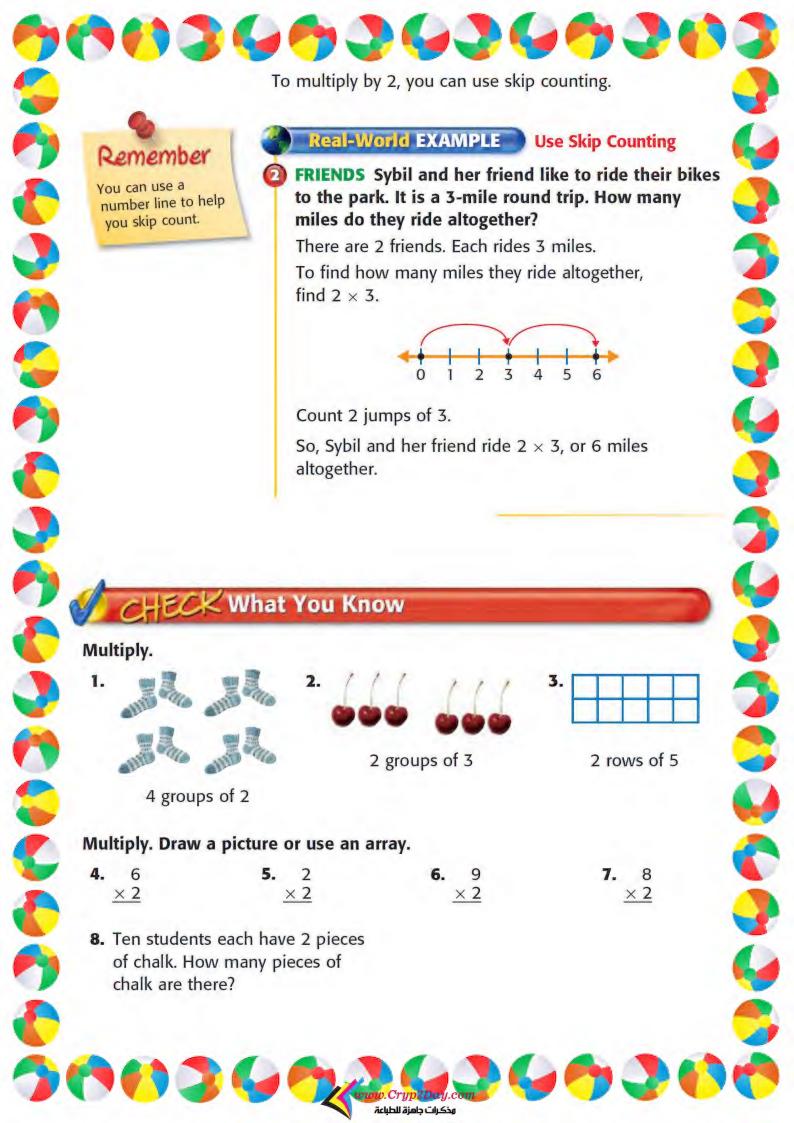


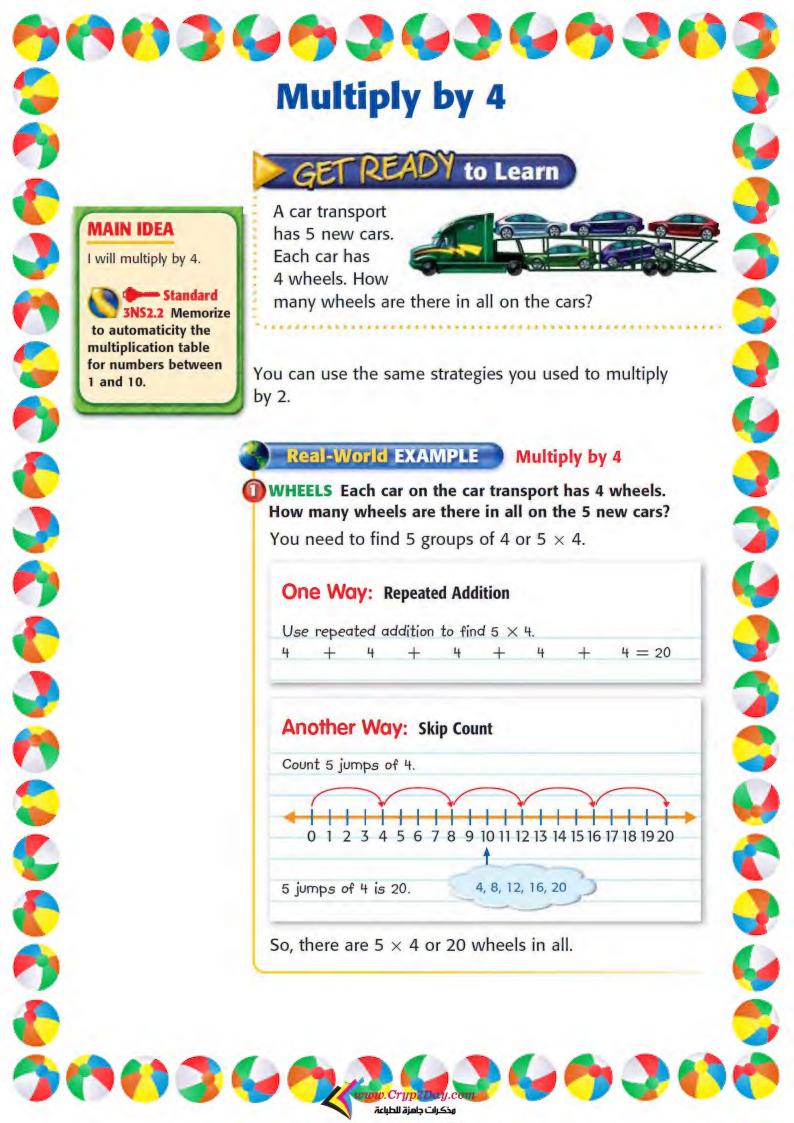


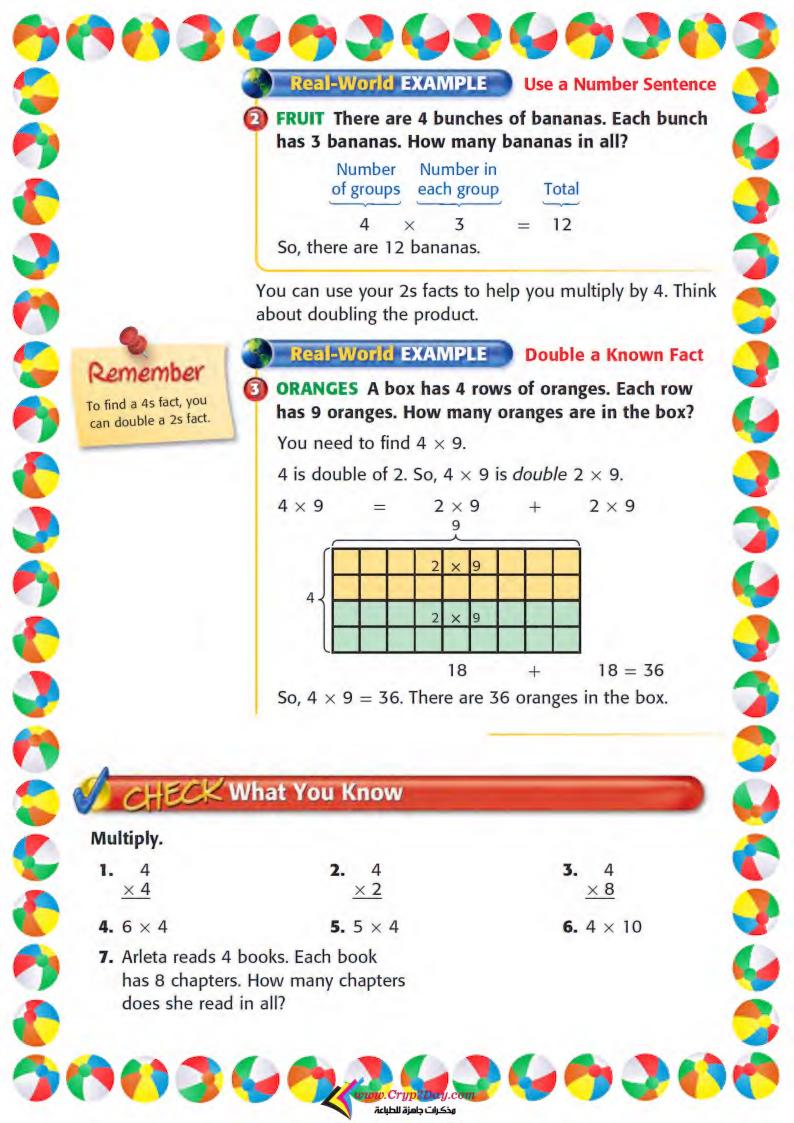


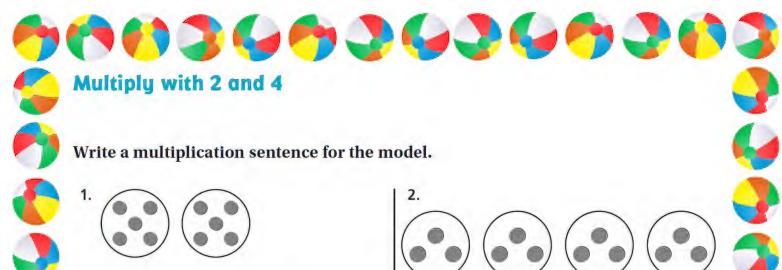






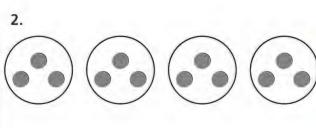






Think: There are 2 groups of 5 counters.

$$2 \times 5 = 10$$



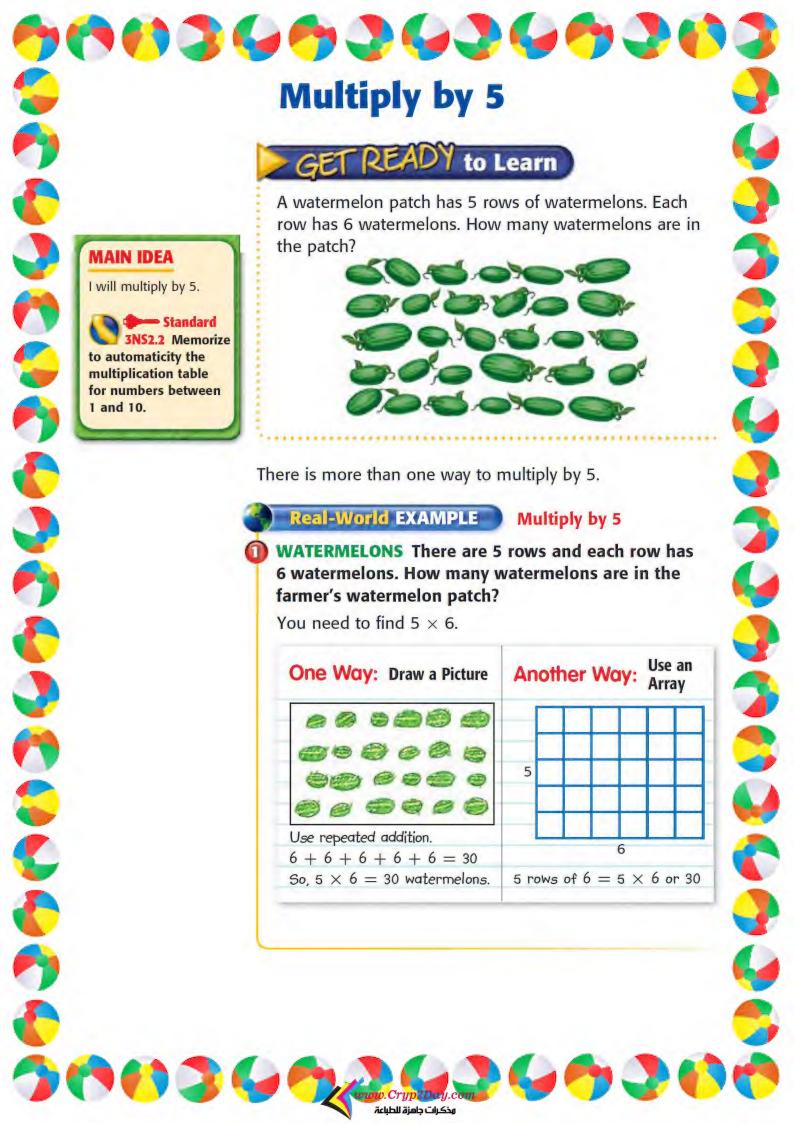
Find the product.

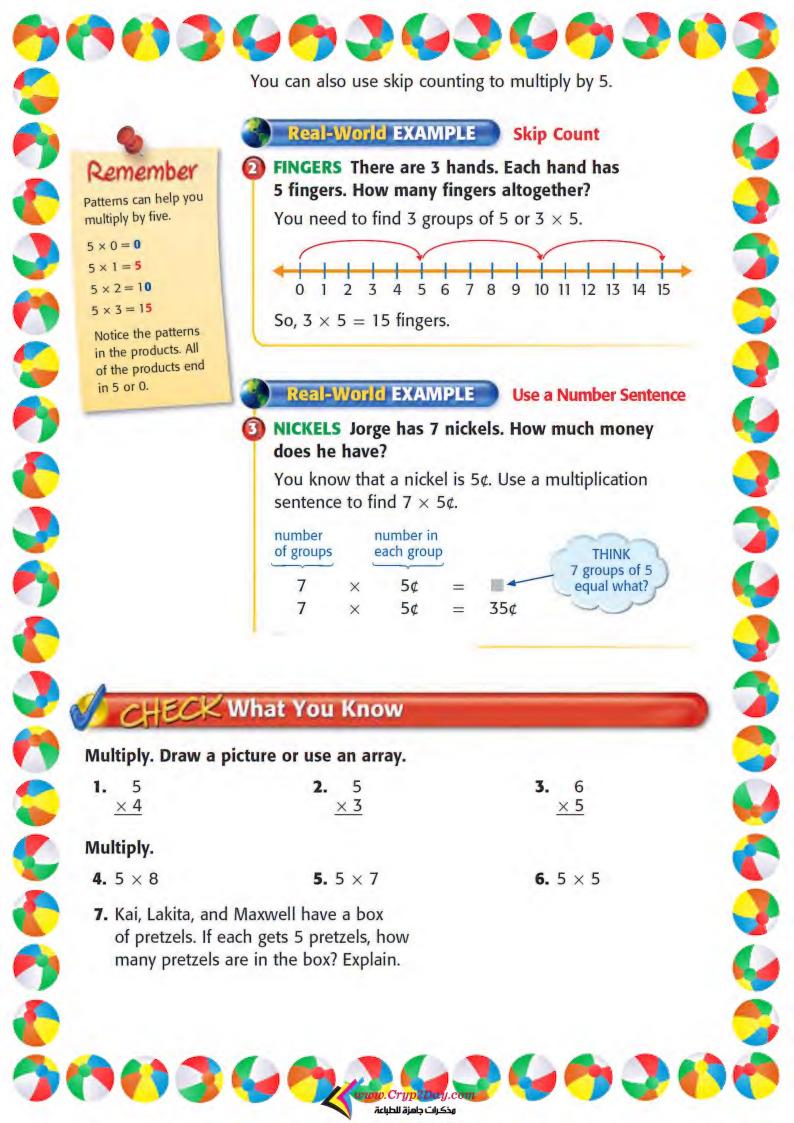
Problem Solving

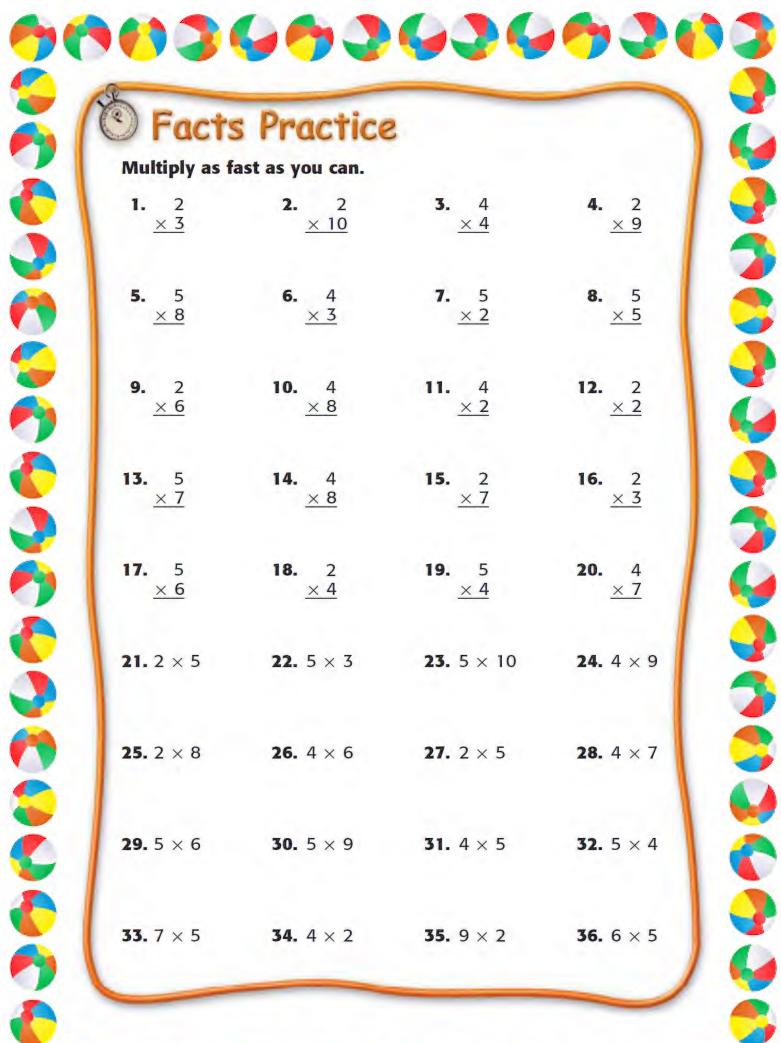
- 7. On Monday, Steven read 9 pages of his new book. To finish the first chapter on Tuesday, he needs to read double the number of pages he read on Monday. How many pages does he need to read on Tuesday?
- 8. Courtney's school is having a family game night. Each table has 4 players. There are 7 tables in all. How many players are at the game night?

9. **WRITE** Math Explain how you can use doubles when multiplying with 4 to find 4×8 .

www.Cryp2Day.c وذكرات جامزة للطباعة





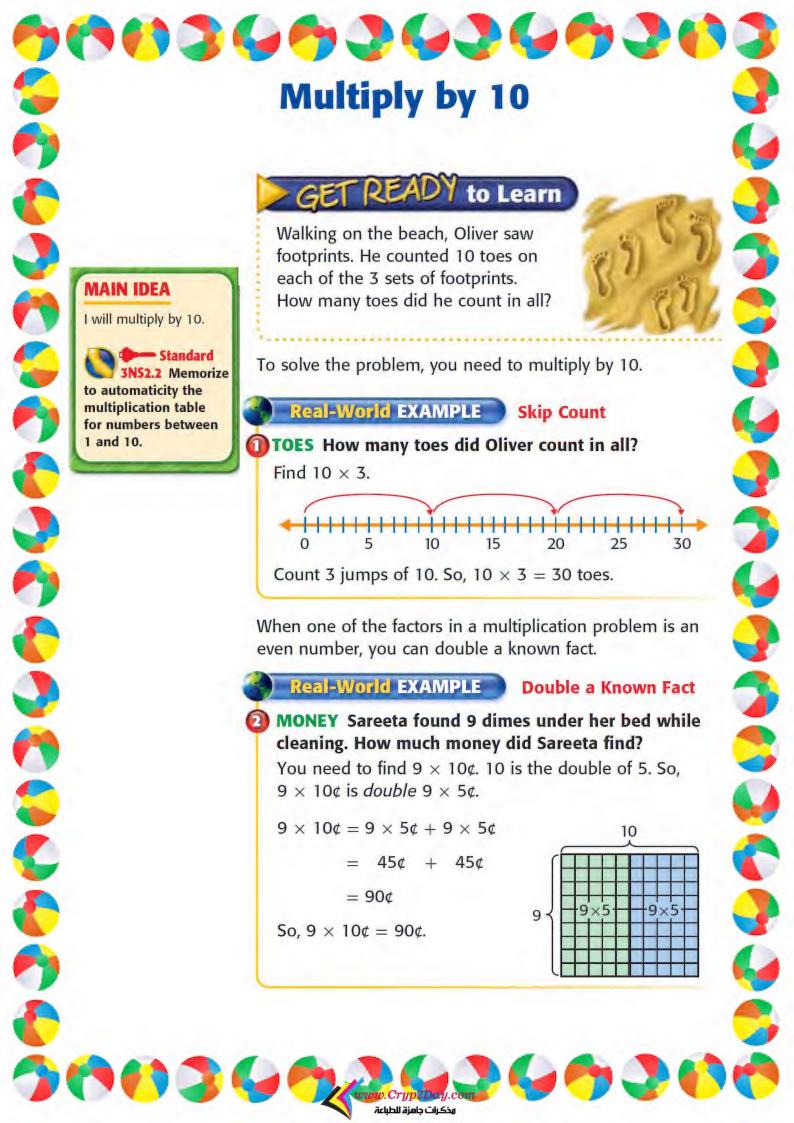


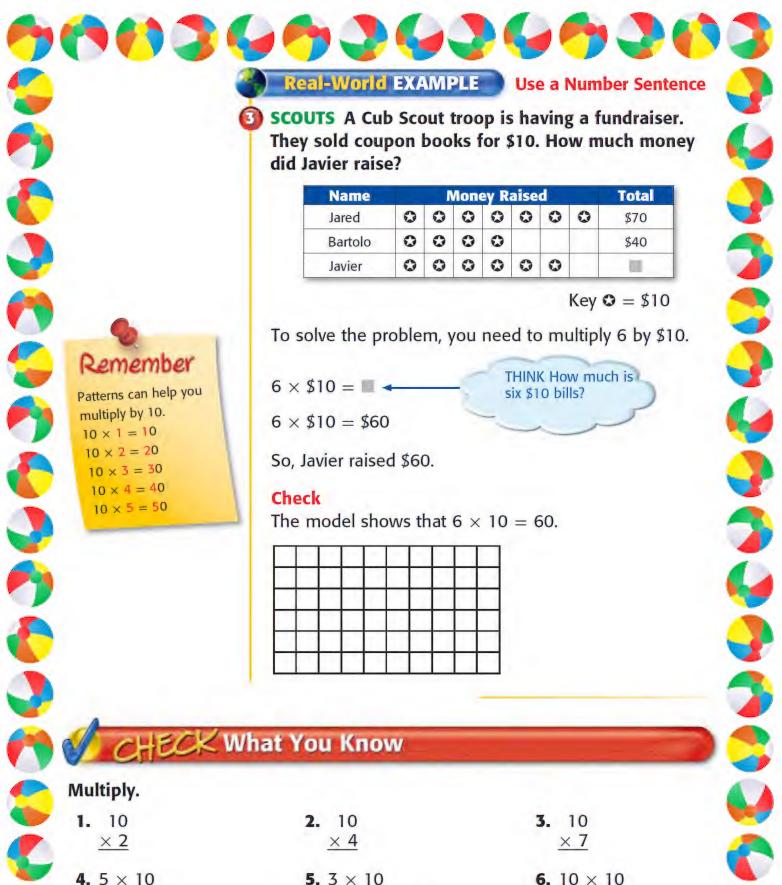
21.
$$2 \times 5$$
 22. 5×3 **23.** 5×10 **24.** 4×9

26.
$$4 \times 6$$
 27. 2×5 **28.** 4×7

29.
$$5 \times 6$$
 30. 5×9 **31.** 4×5 **32.** 5×4

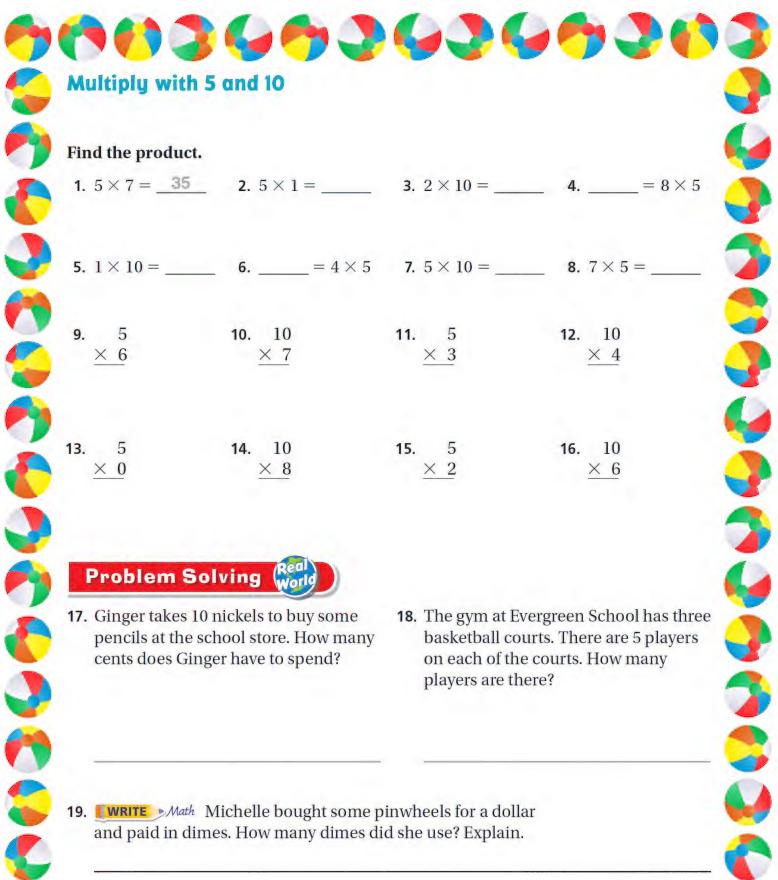
33.
$$7 \times 5$$
 34. 4×2 **35.** 9×2 **36.** 6×5





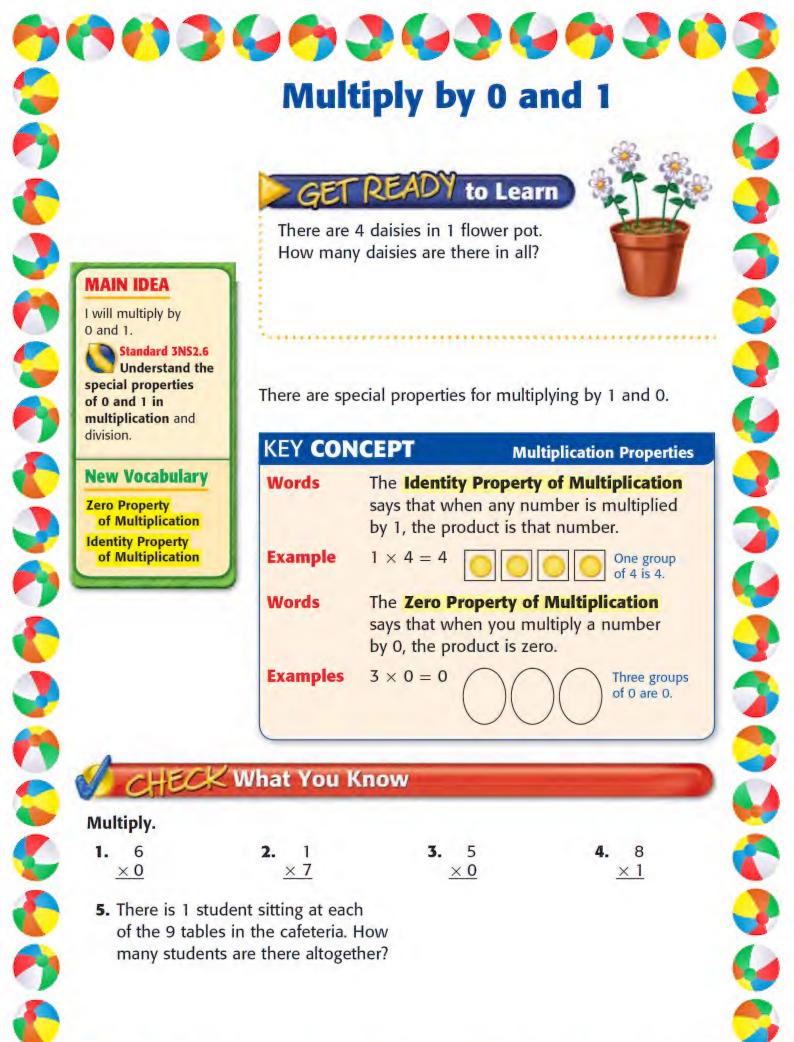
6.
$$10 \times 10$$





and paid in dimes. How many dimes did she use? Explain.

www.Cryp2Day.com هذكرات جامزة للطباعة



There are special properties for multiplying by 1 and 0.

KEY CONCEPT

Multiplication Properties

Words The Identity Property of Multiplication

says that when any number is multiplied by 1, the product is that number.

Example $1 \times 4 = 4$ One group of 4 is 4.

Words The Zero Property of Multiplication

says that when you multiply a number by 0, the product is zero.

Examples $3 \times 0 = 0$ Three groups of 0 are 0.

CK What You Know

5. There is 1 student sitting at each

of the 9 tables in the cafeteria. How many students are there altogether?

Multiply.

special properties

New Vocabulary

Zero Property of Multiplication

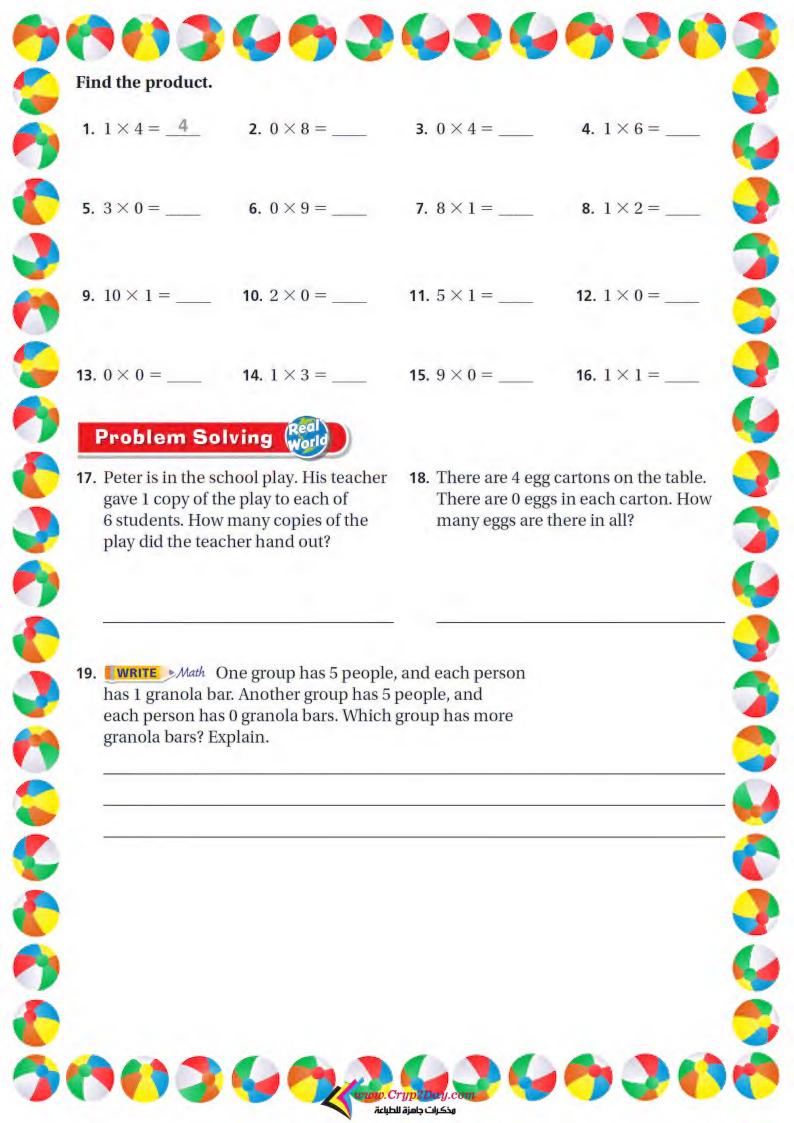
Identity Property

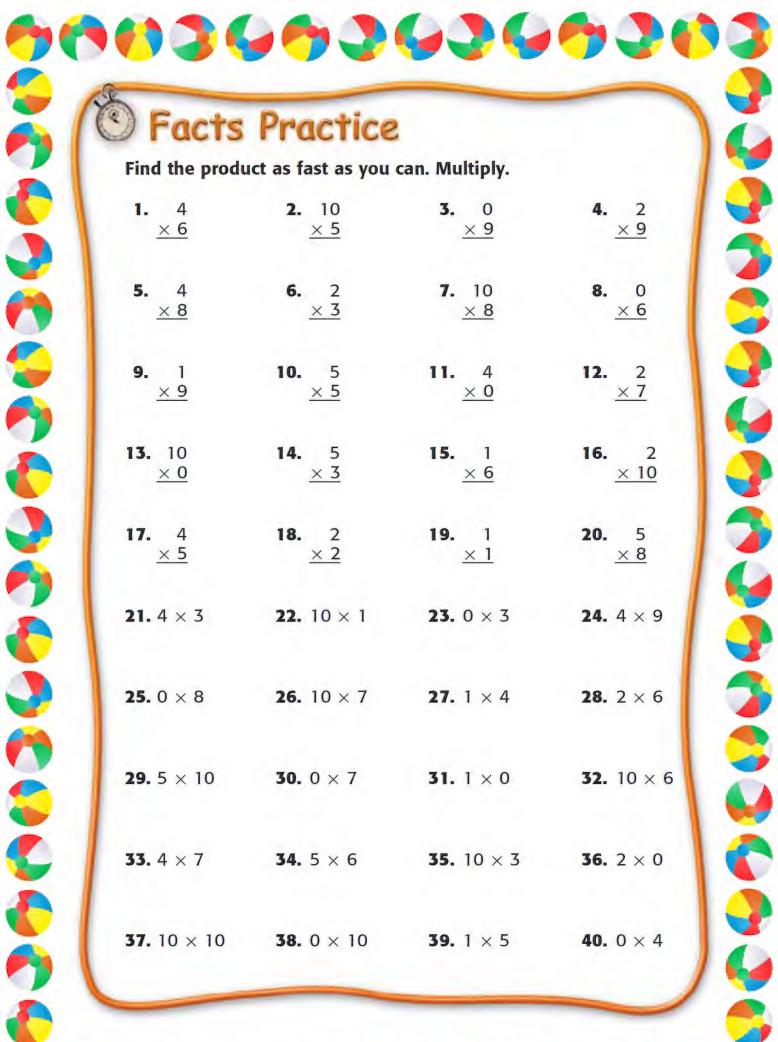
of Multiplication

of 0 and 1 in multiplication and

division.

www.Cryp2Day.com هذكرات جامزة للطباعة



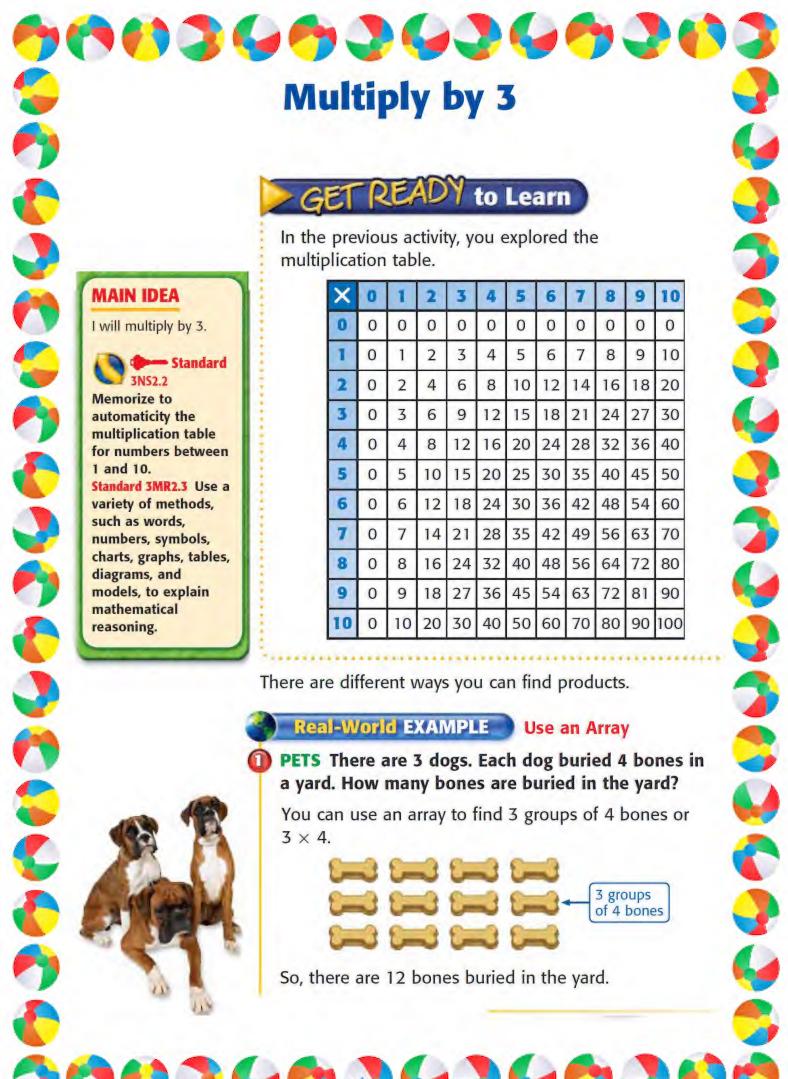


38.
$$0 \times 10$$

39.
$$1 \times 5$$

www.Cryp2Day.com هذكرات جامزة للطباعة

40.
$$0 \times 4$$





Memorize to automaticity the multiplication table for numbers between 1 and 10. Standard 3MR2.3 Use a variety of methods, such as words, numbers, symbols, charts, graphs, tables, diagrams, and models, to explain mathematical reasoning.

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

There are different ways you can find products.

Real-World EXAMPLE Use an Array

PETS There are 3 dogs. Each dog buried 4 bones in a yard. How many bones are buried in the yard?

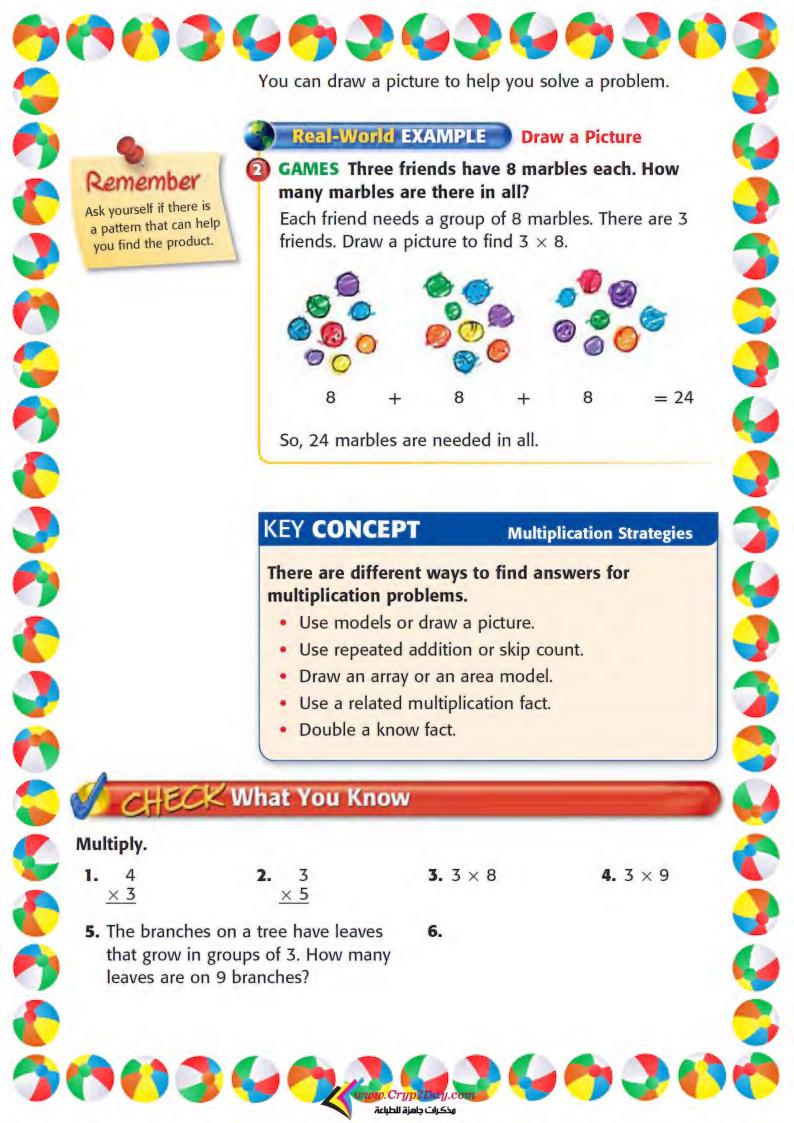
You can use an array to find 3 groups of 4 bones or 3×4 .

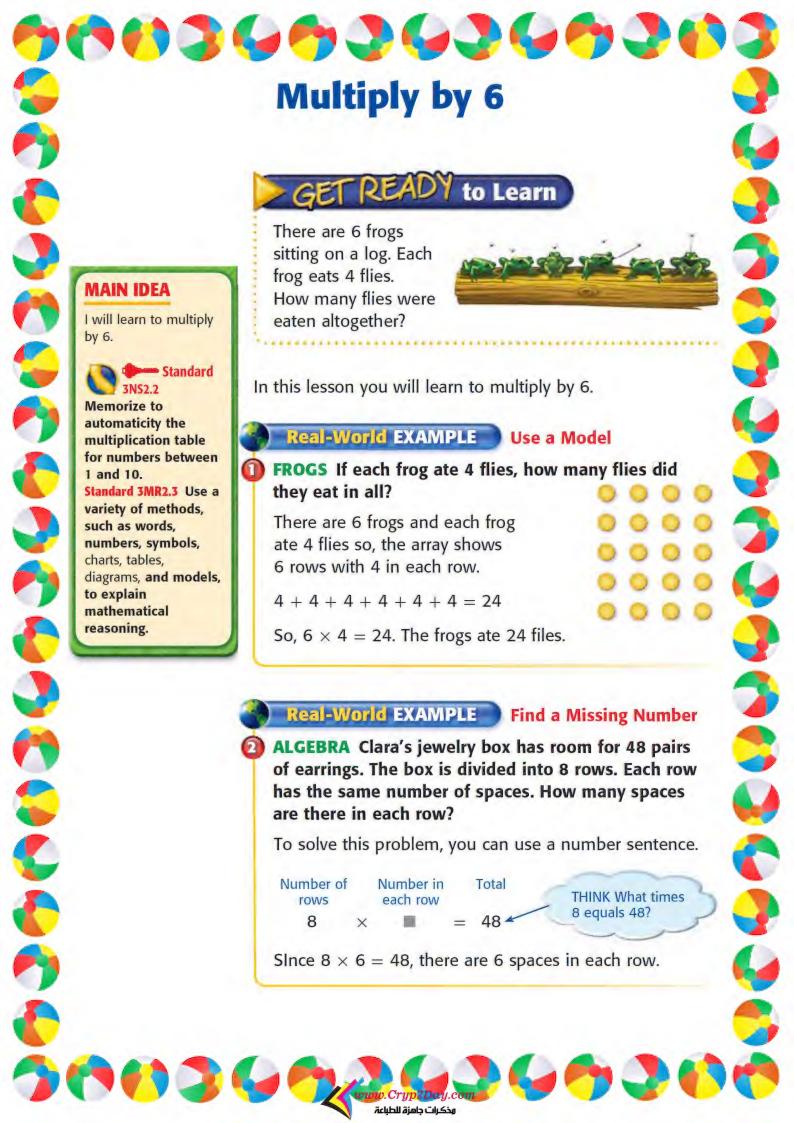


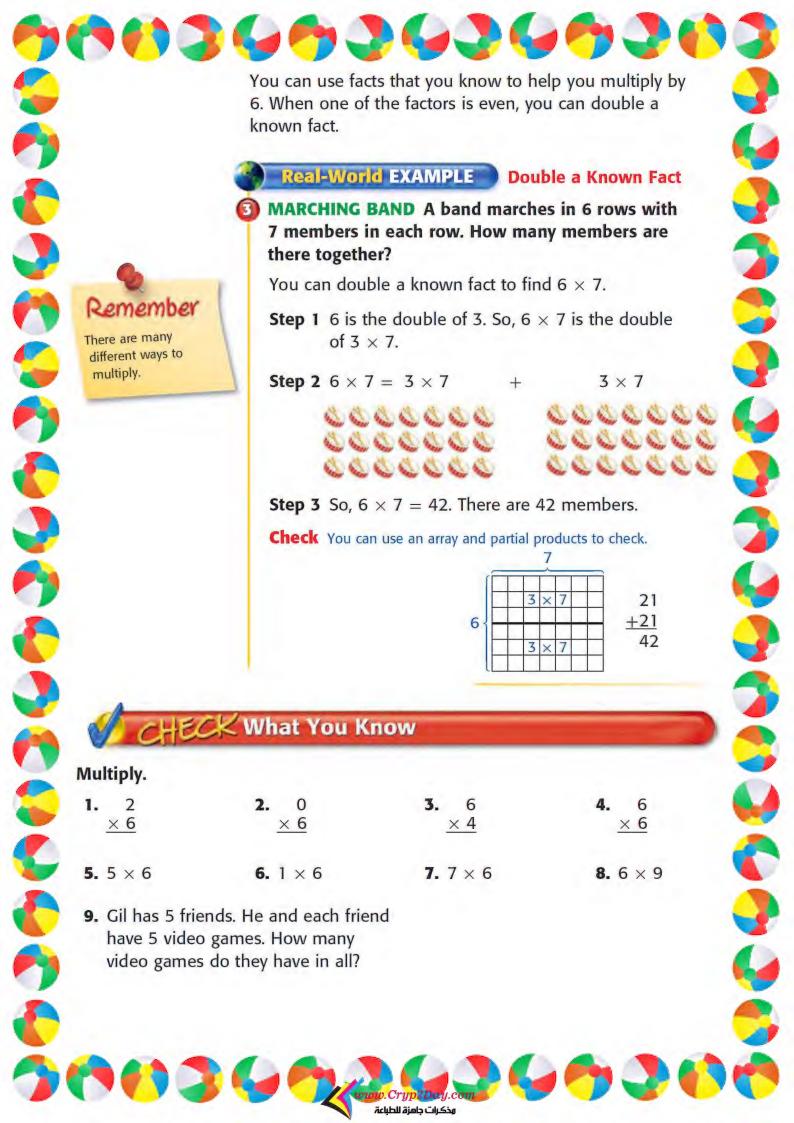
So, there are 12 bones buried in the yard.

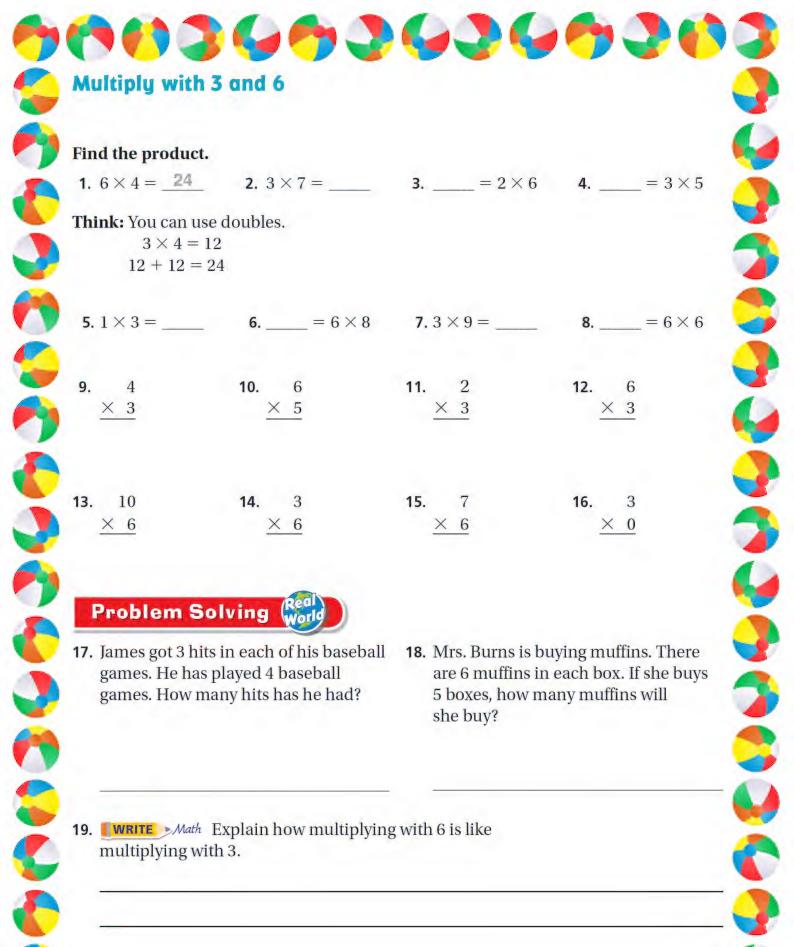
هذكرات جامزة للطباعة





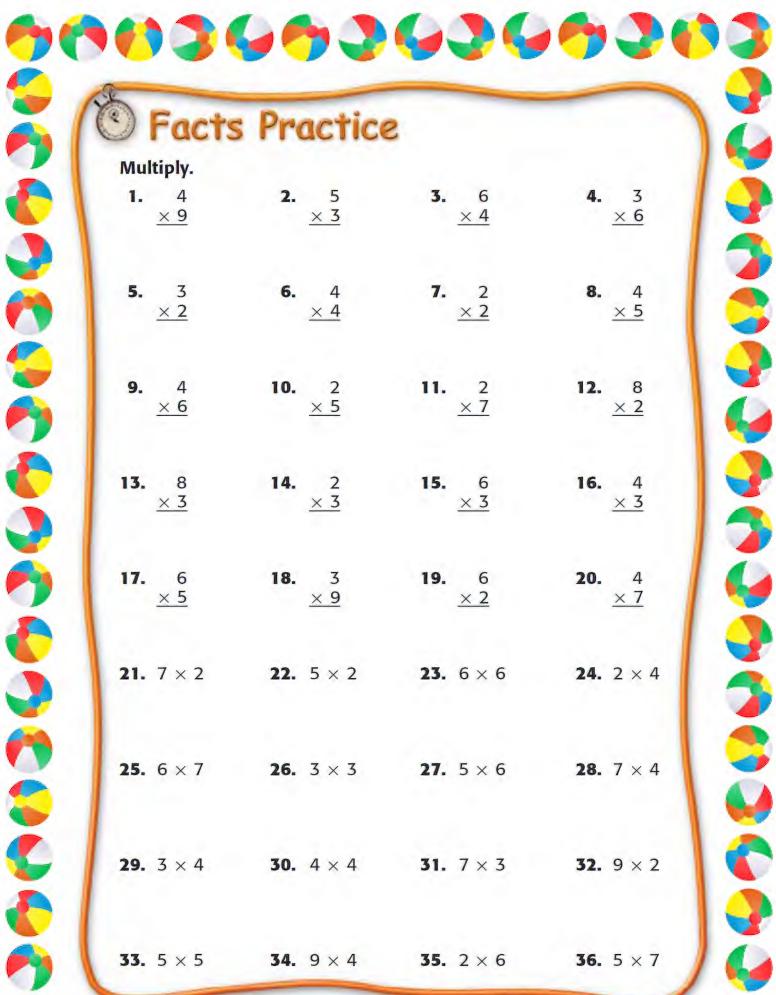












30.
$$4 \times 4$$

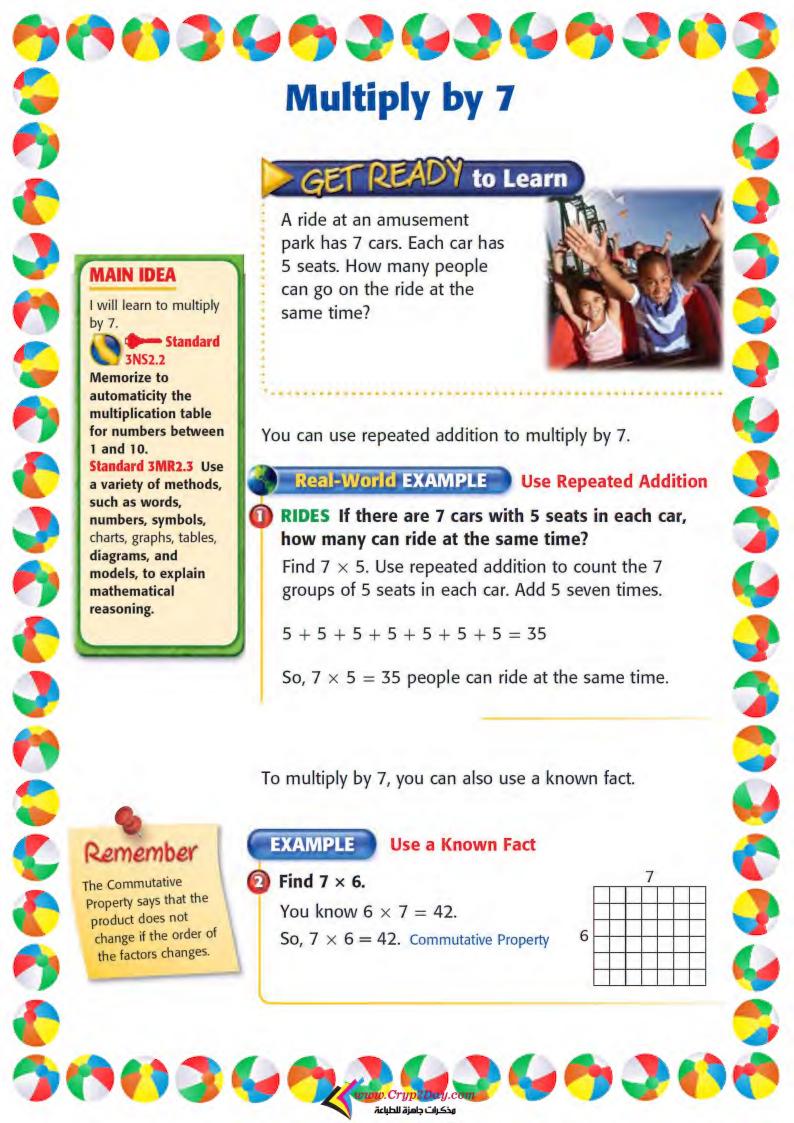
31.
$$7 \times 3$$

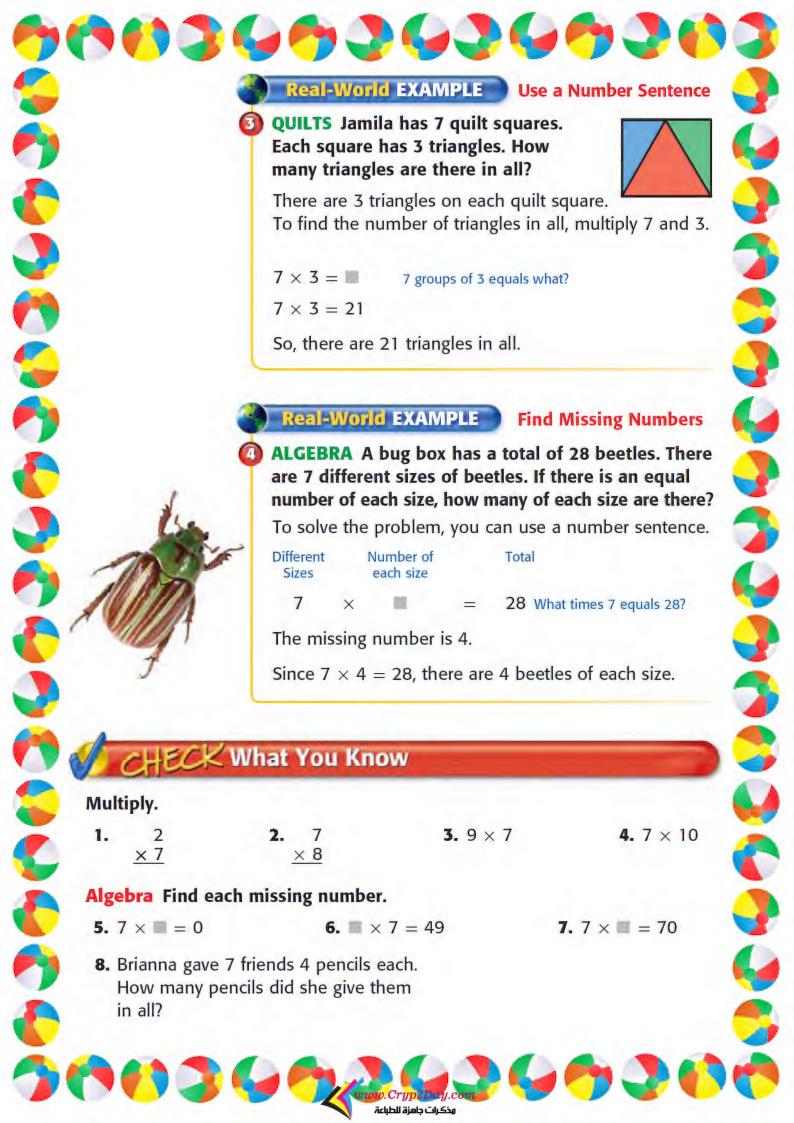
32.
$$9 \times 2$$

34.
$$9 \times 4$$

مند کرات جامزة للطباعة

33.
$$5 \times 5$$
 34. 9×4 **35.** 2×6 **36.** 5×7







Find the product.

1.
$$6 \times 7 = 42$$

2. ____ =
$$7 \times 9$$

1.
$$6 \times 7 = 42$$
 2. $= 7 \times 9$ **3.** $= 1 \times 7$

4.
$$3 \times 7 =$$

5.
$$7 \times 7 =$$
 6. $_{---} = 2 \times 7$

7.
$$7 \times 8 =$$

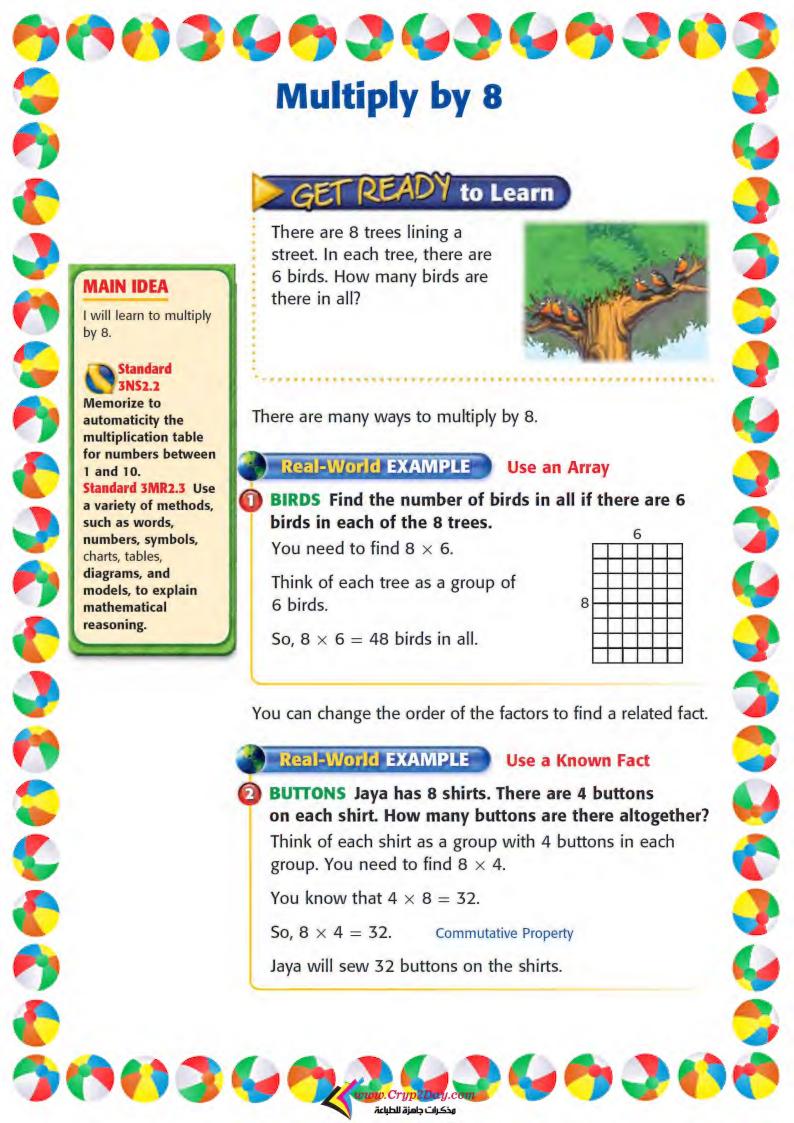
8. ____ =
$$4 \times 7$$

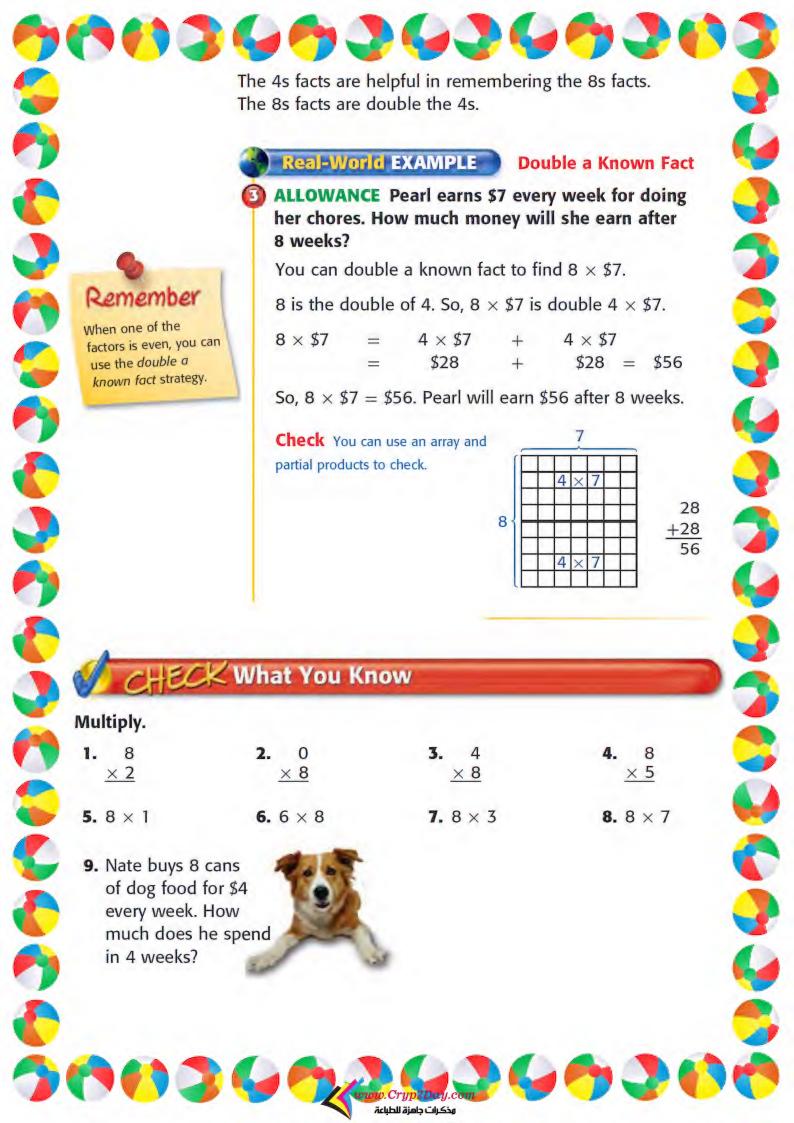
3000

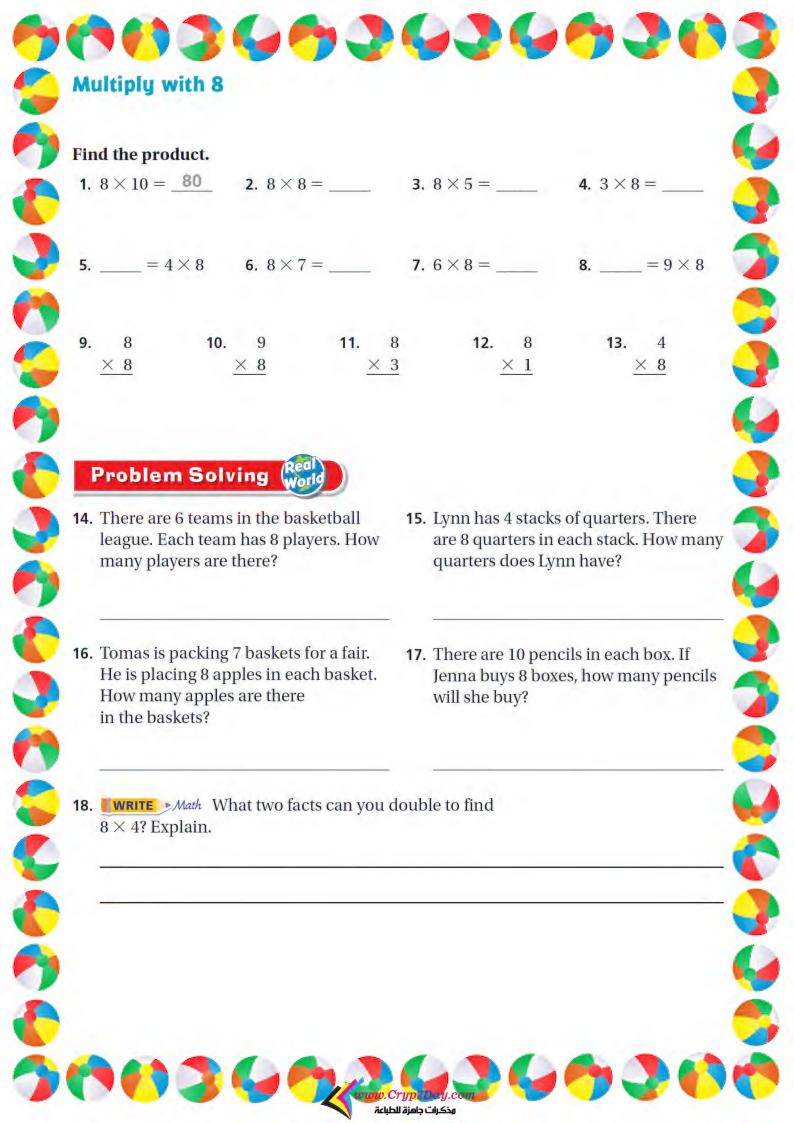
Problem Solving

- **19**. Julie buys a pair of earrings for \$7. Now she would like to buy the same earrings for 2 of her friends. How much will she spend for all 3 pairs of earrings?
- 20. Owen and his family will go camping in 8 weeks. There are 7 days in 1 week. How many days are in 8 weeks?

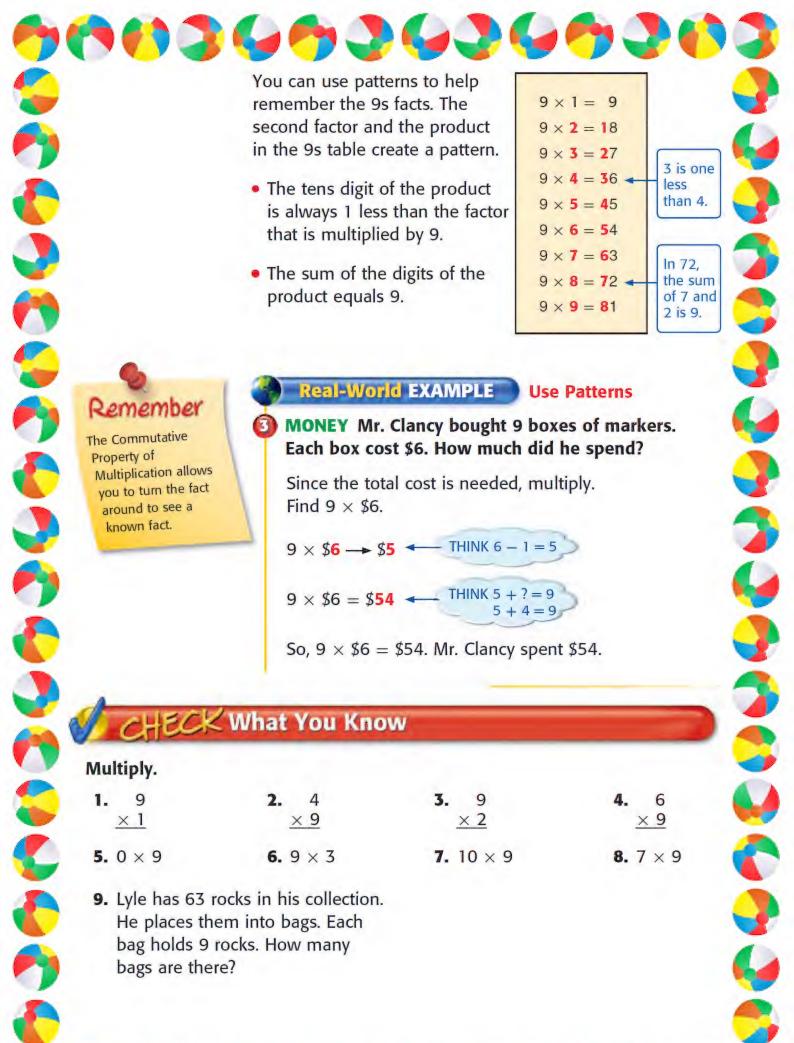
21. **[WRITE** Math Explain how you would use the Commutative Property of Multiplication to answer 7×3 .





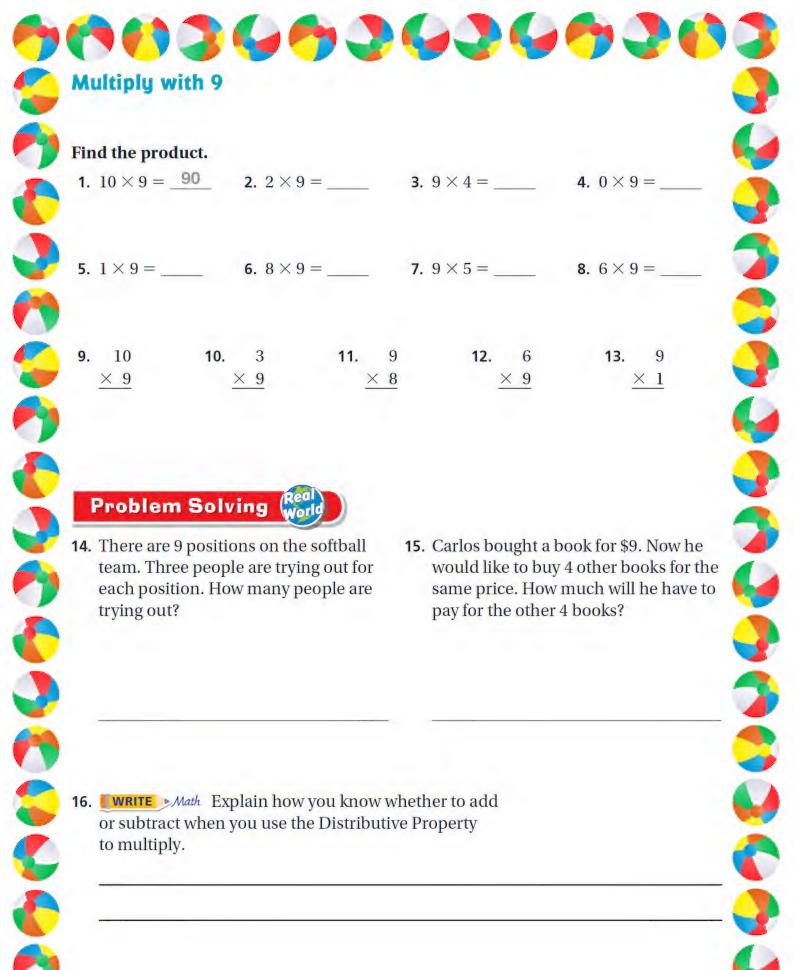






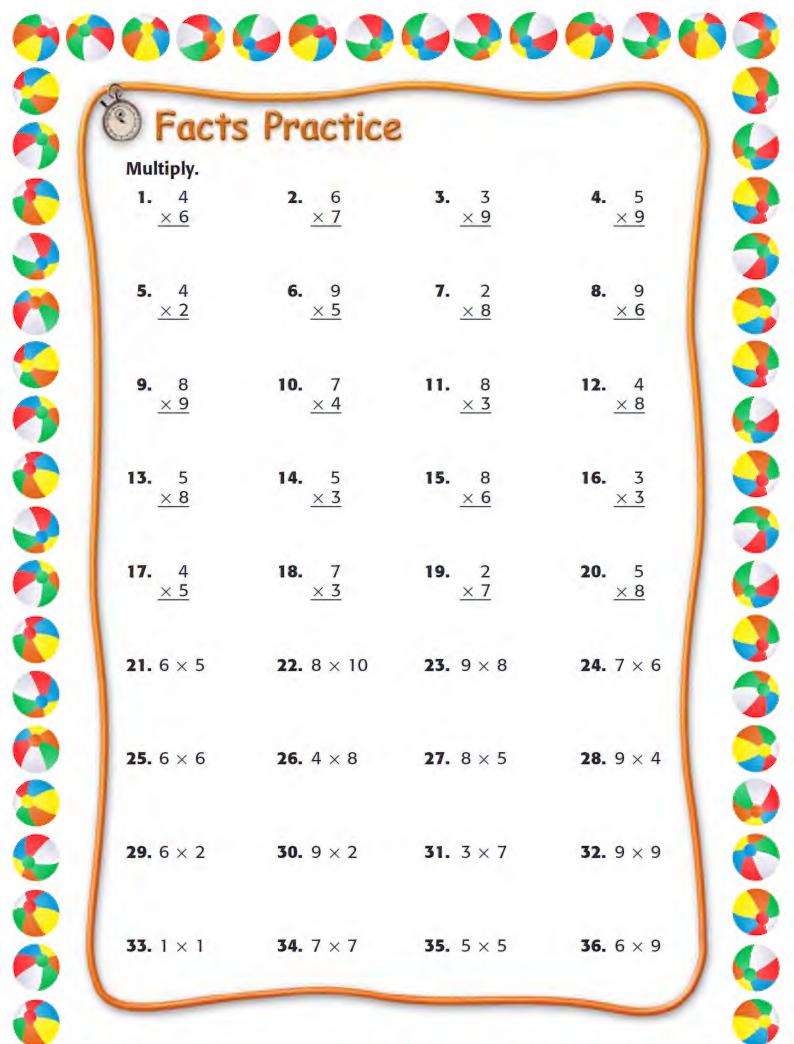
www.Cryp2Day.c هذكرات جامزة للطباعة

bags are there?





www.Cryp2Day.com قذكرات جاهزة للطباعة



33.
$$1 \times 1$$

33.
$$1 \times 1$$
 34. 7×7 **35.** 5×5 **36.** 6×9

36.
$$6 \times 9$$





























Write a multiplication sentence for each array.





Set B

Find each product.

Set C

Multiply.

Set D

Find each product.

Set E

Multiply.

Set F

Find each product.

$$2.0 \times 1$$











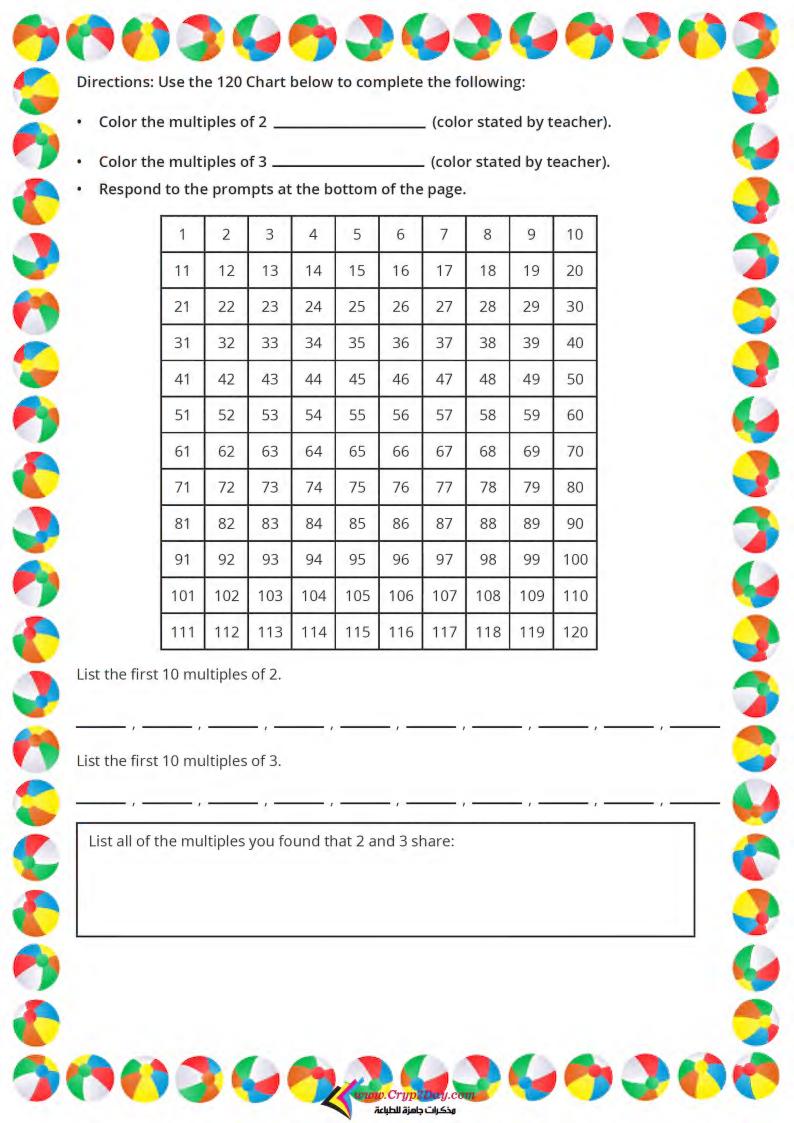


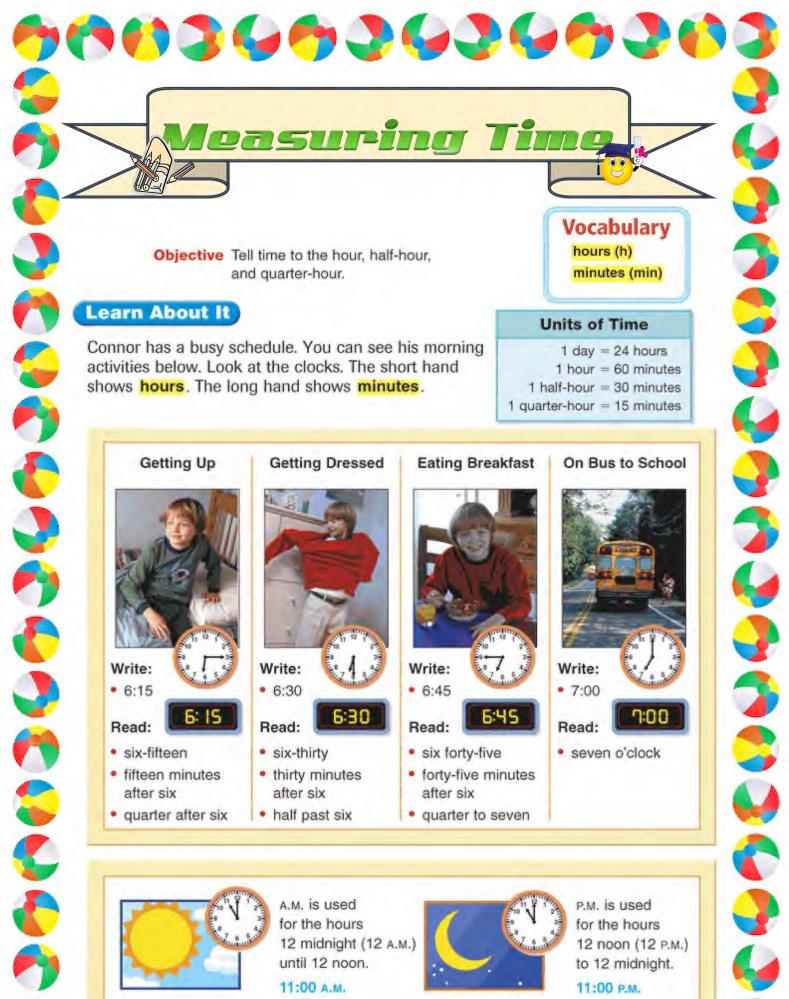














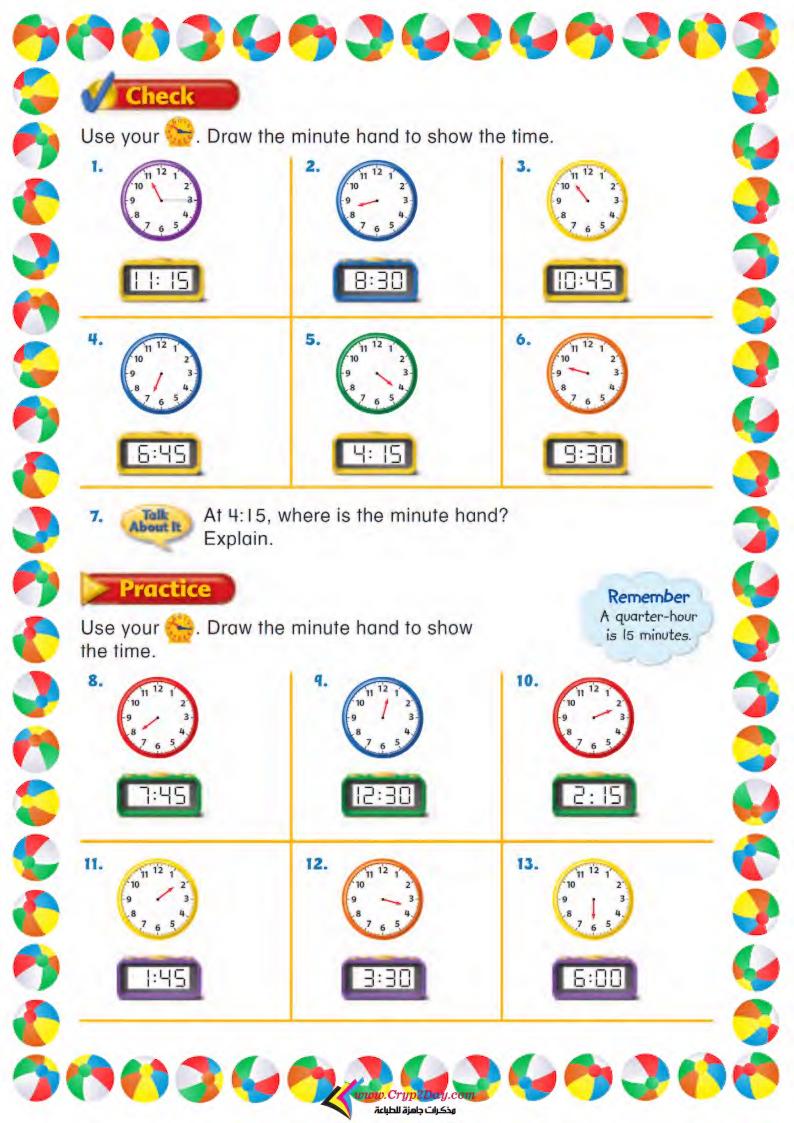
until 12 noon.

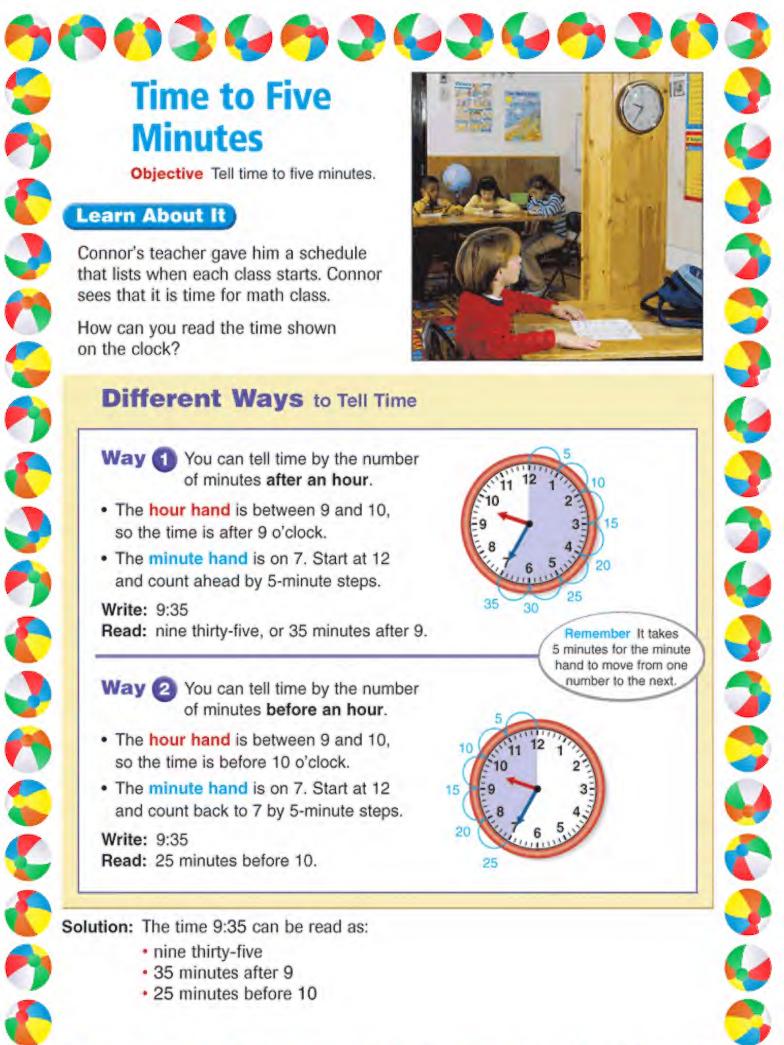
وذكرات جامزة للطباعة

11:00 A.M.



to 12 midnight. 11:00 P.M.





 The minute hand is on 7. Start at 12 and count back to 7 by 5-minute steps.

Write: 9:35

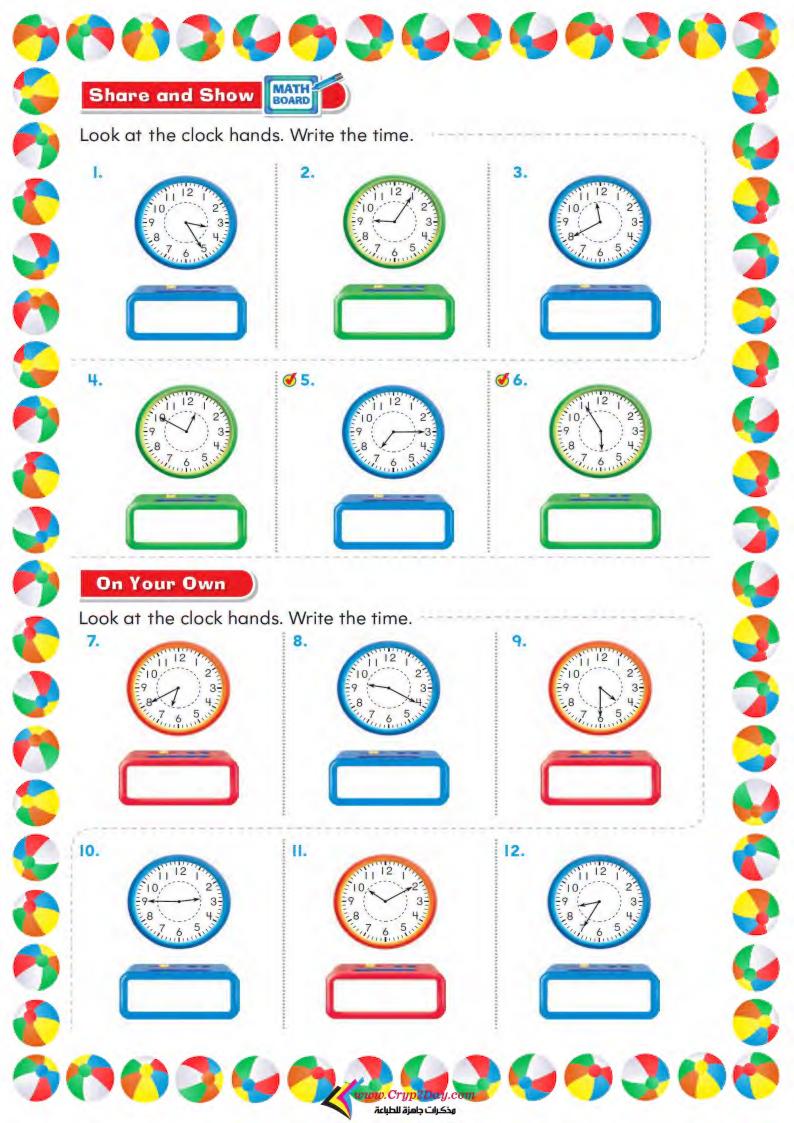
Read: 25 minutes before 10.

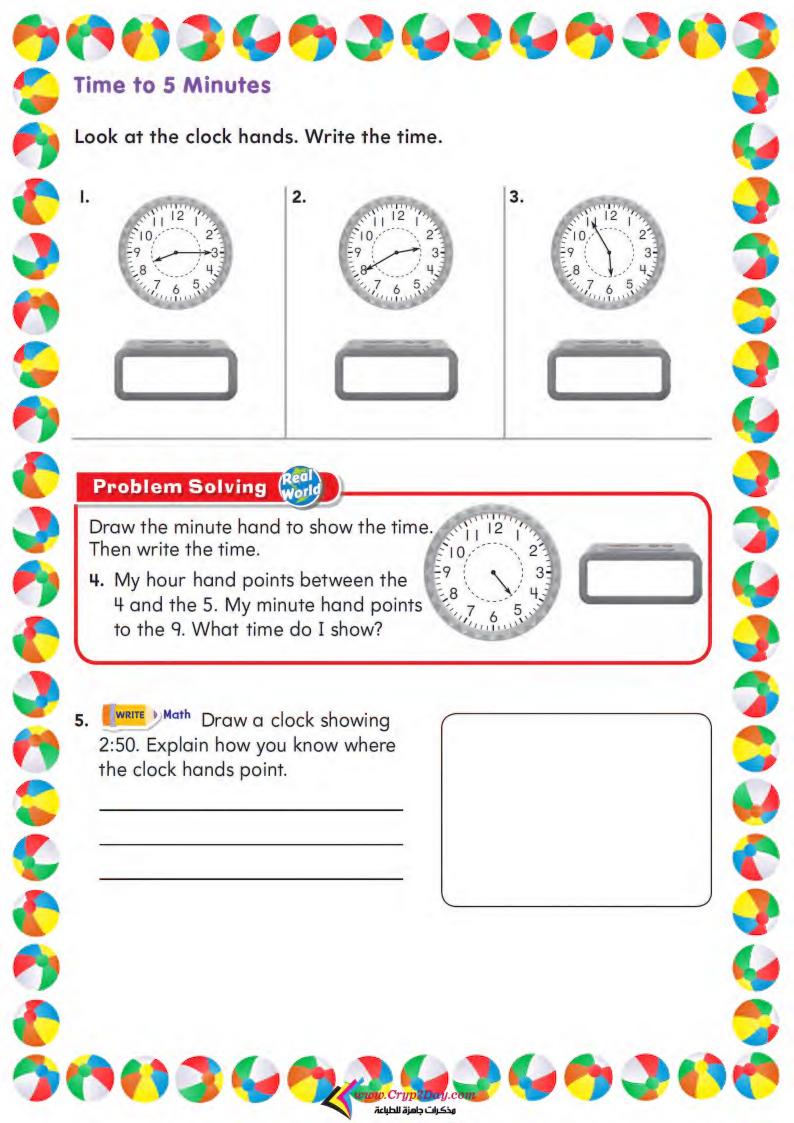


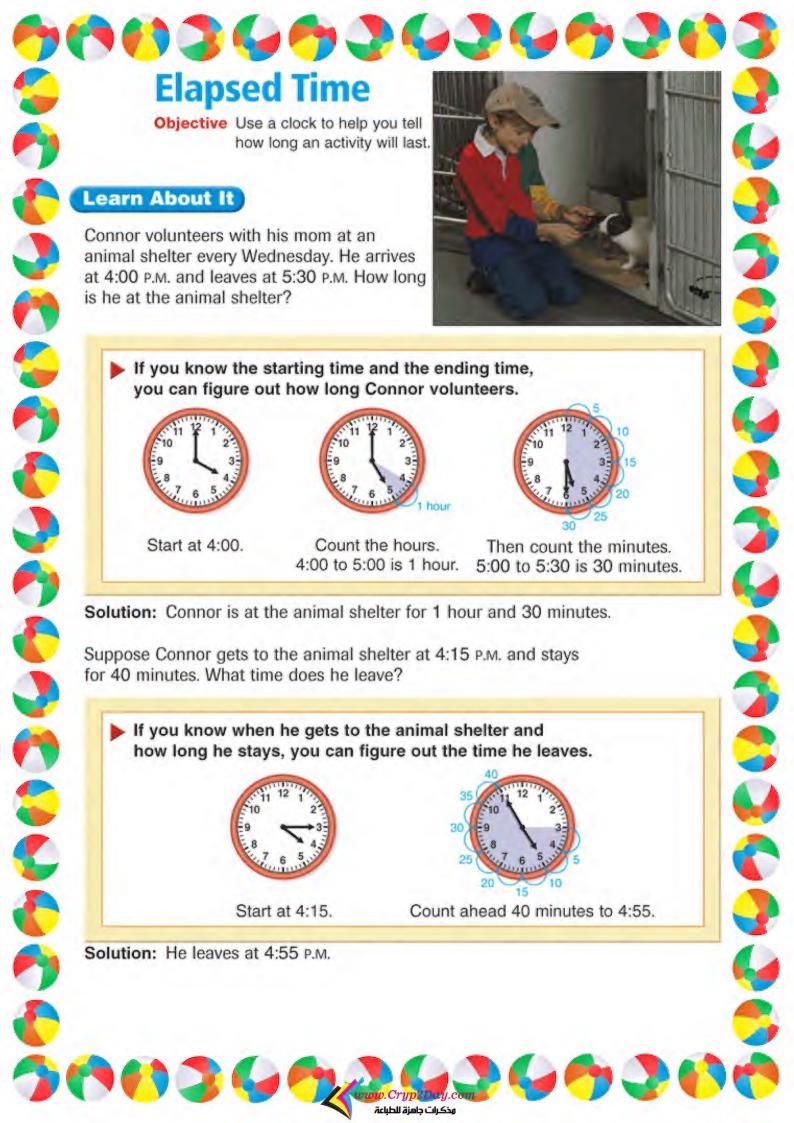
Solution: The time 9:35 can be read as:

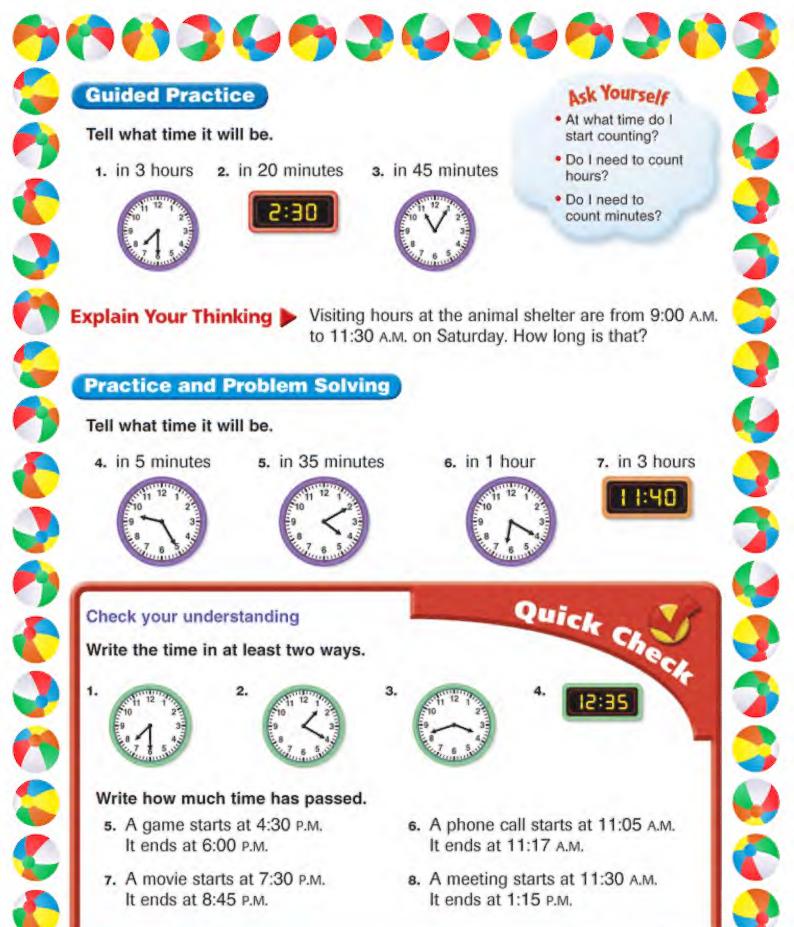
- nine thirty-five
- 35 minutes after 9
- 25 minutes before 10







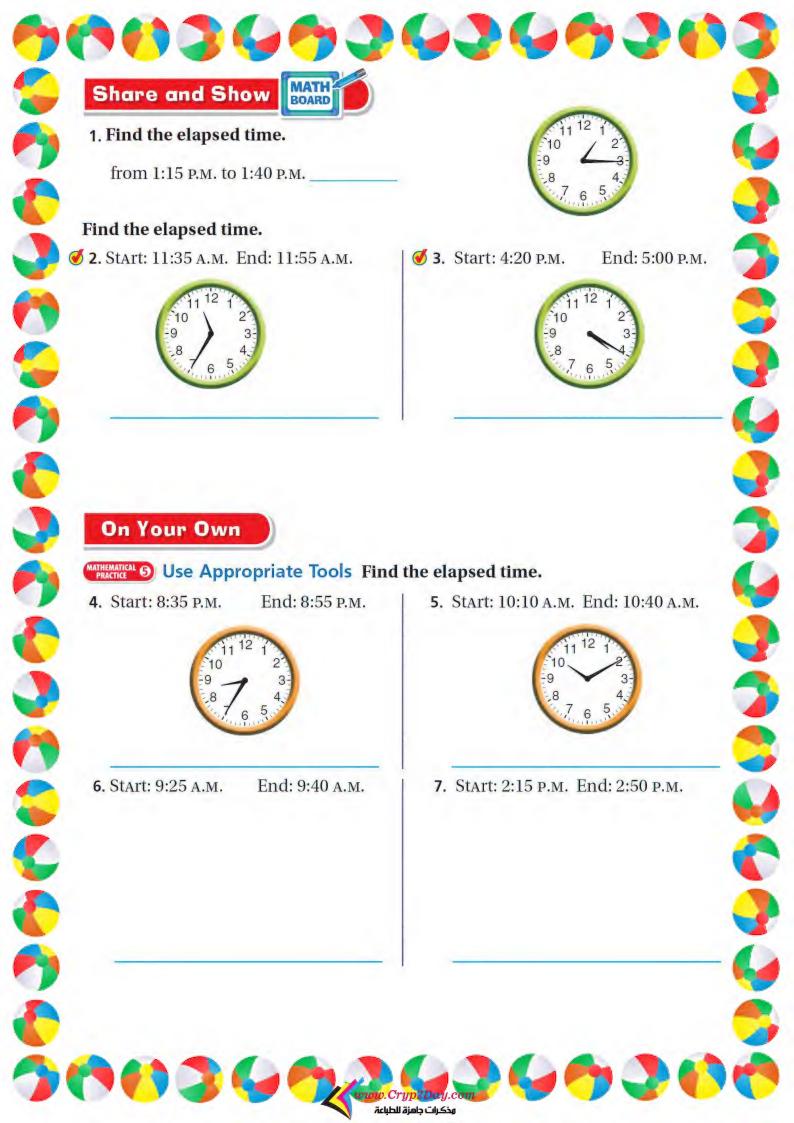


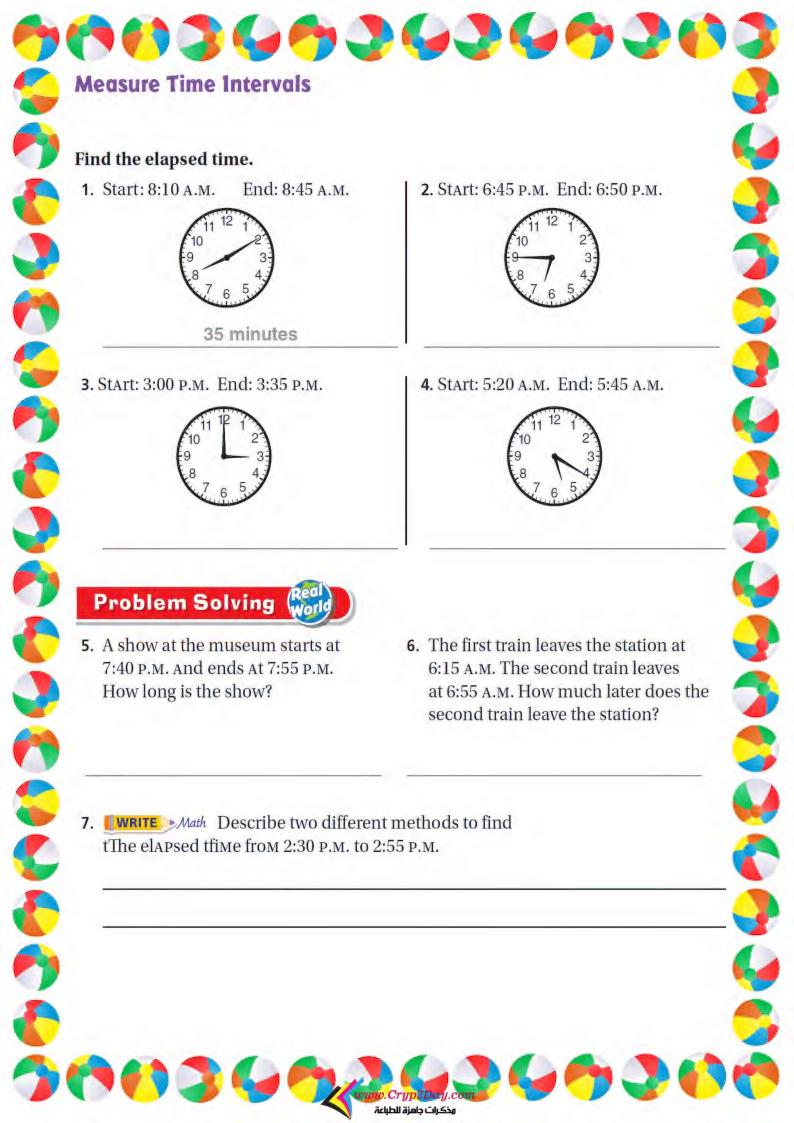


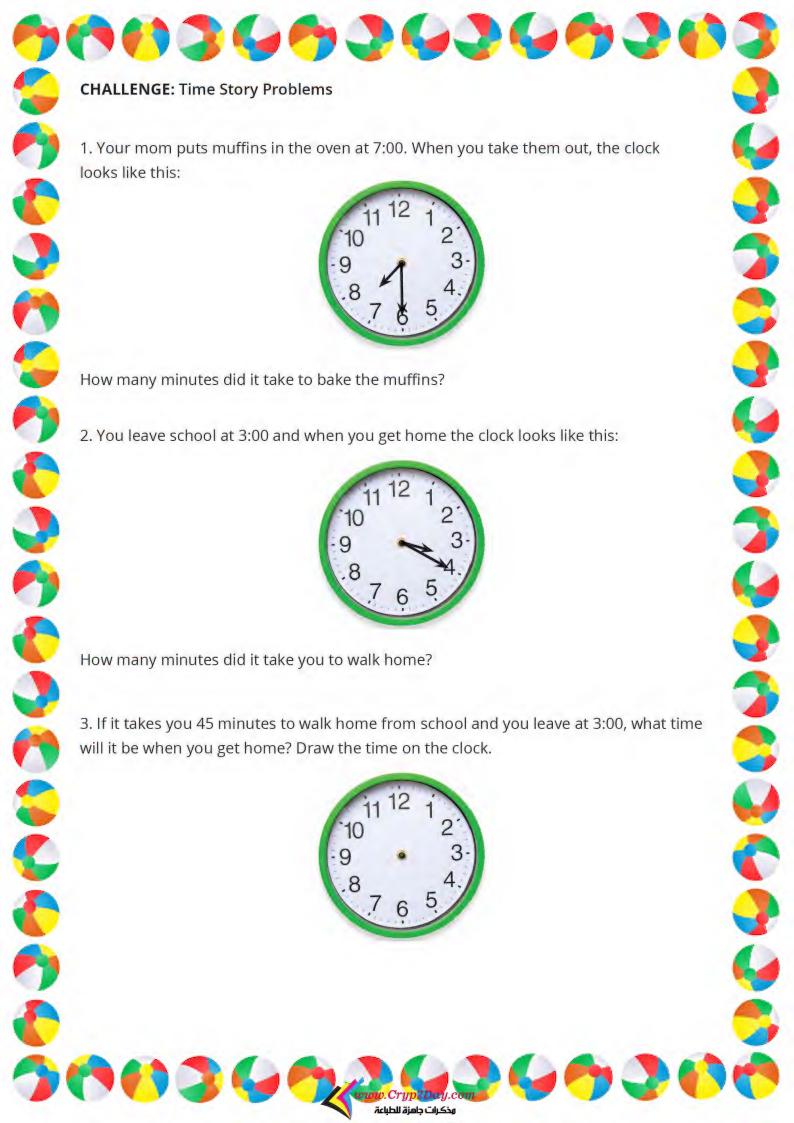
It ends at 8:45 P.M.

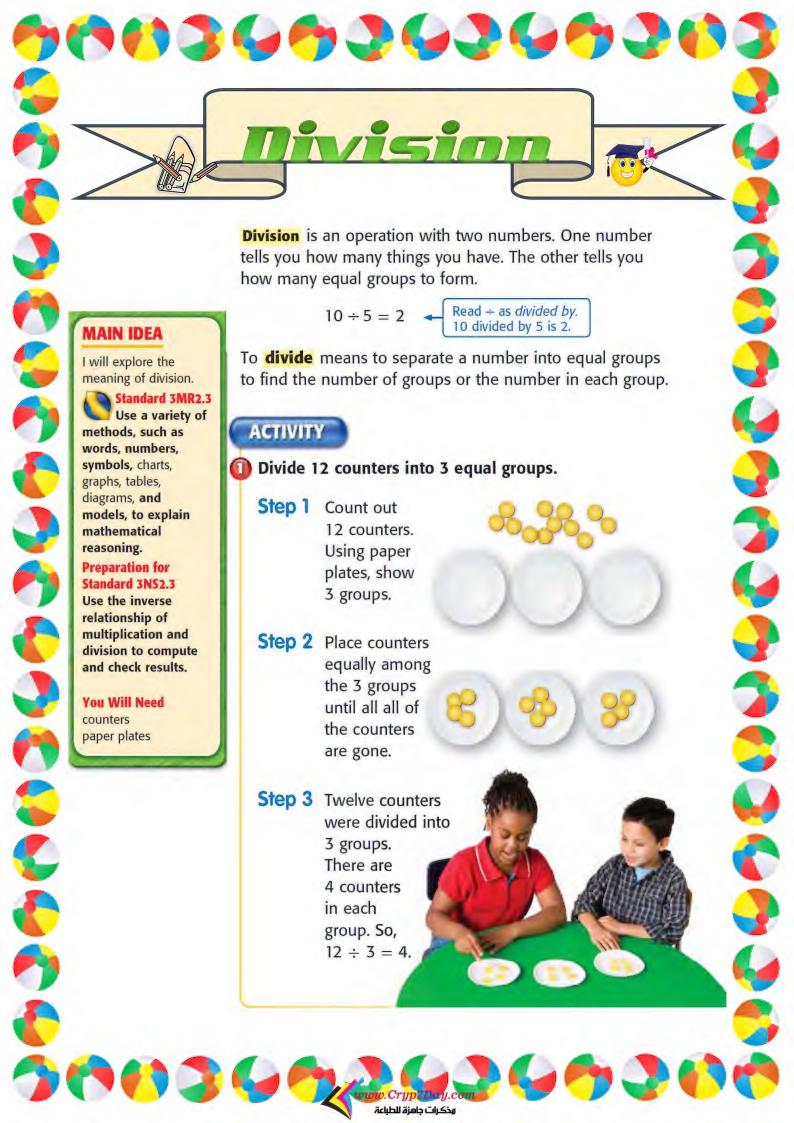
It ends at 1:15 P.M.

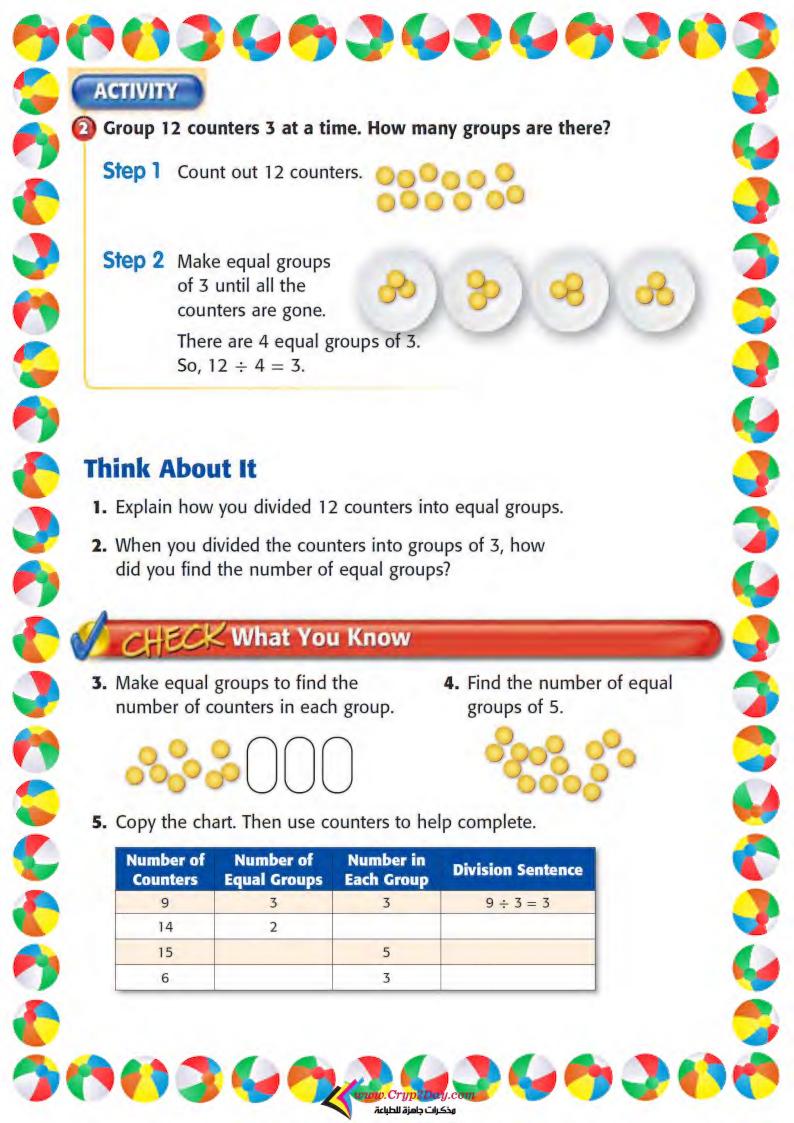
www.Cryp2Day.com وذكرات جامزة للطباعة



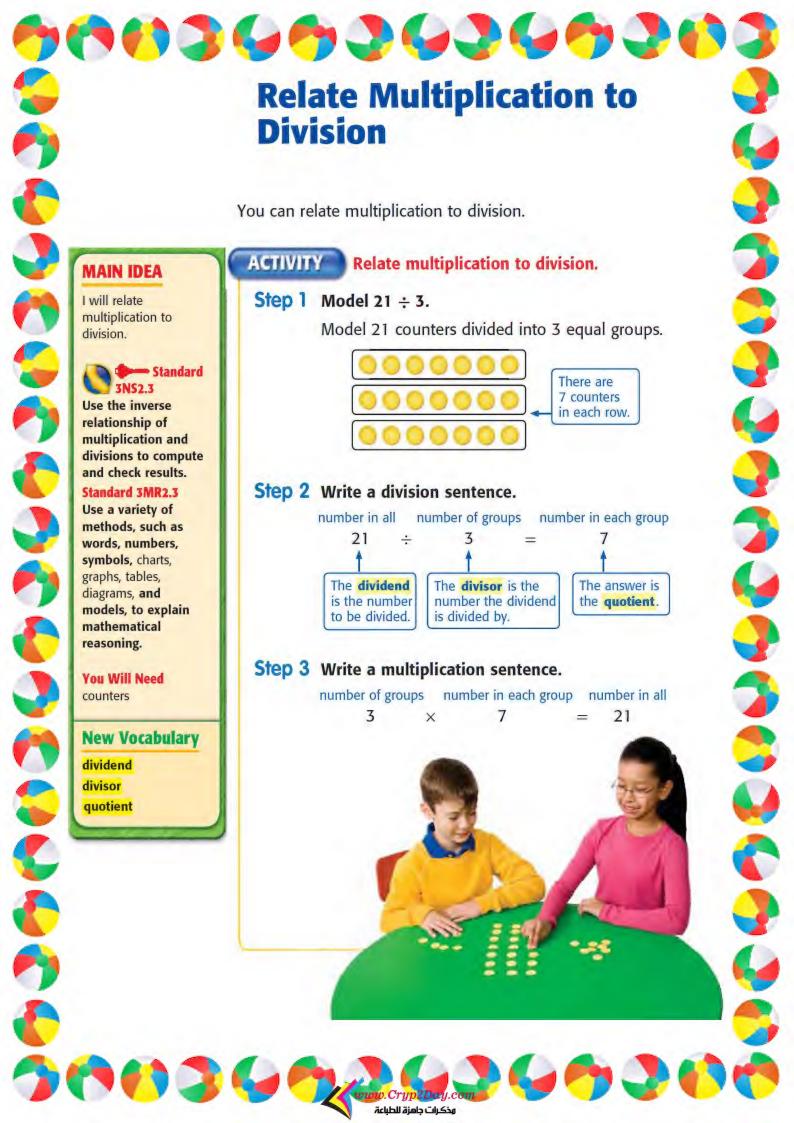


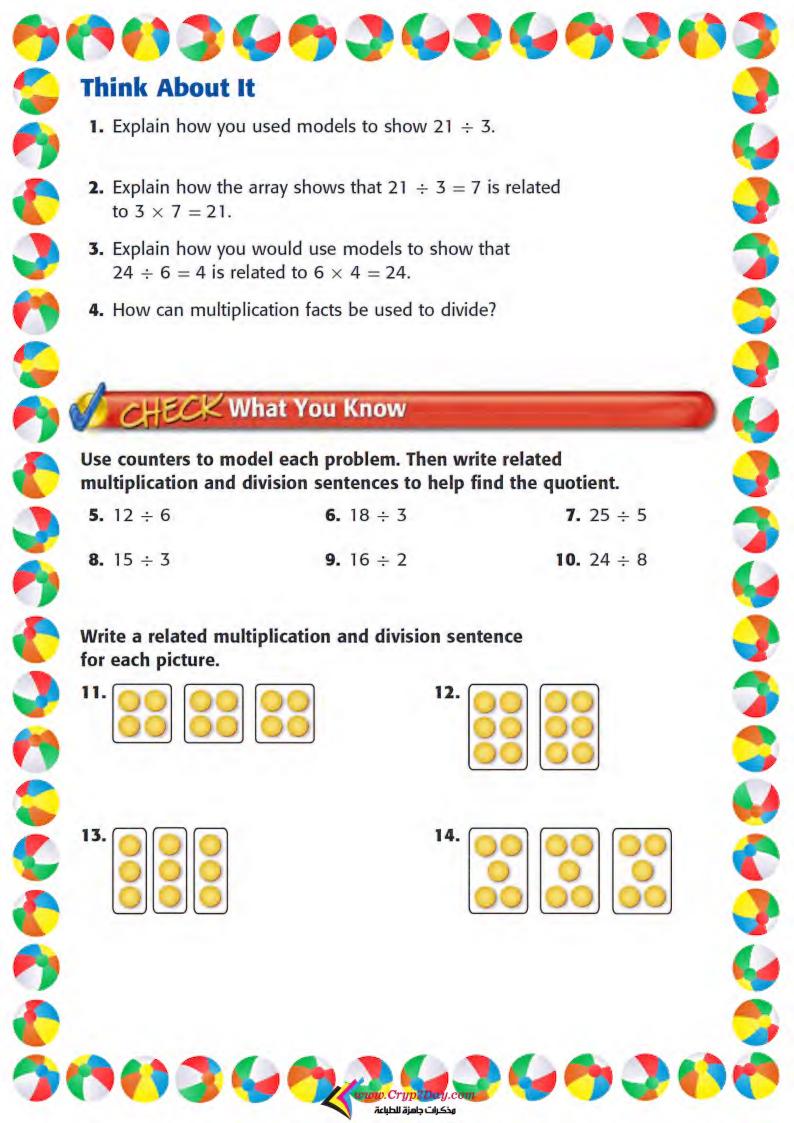
















$$2 \times 8 = 16$$

$$16 \div 2 = 8$$

Write the related facts for the array.

2.



∅ 3.



4.



5. Why do the related facts for the array in Exercise 2 have only two equations?

Write the related facts for the set of numbers.



Complete the related facts.

9.
$$4 \times 7 = _{__}$$

$$28 \div 4 =$$

10.
$$5 \times \underline{} = 30$$

$$6 \times _{---} = 30$$

$$30 \div 6 =$$

$$30 \div 5 =$$

11.
$$\underline{\hspace{1cm}} \times 9 = 27$$

$$_{---} \times 3 = 27$$

$$---$$
 ÷ 9 = 3

$$27 \div _{---} = 9$$















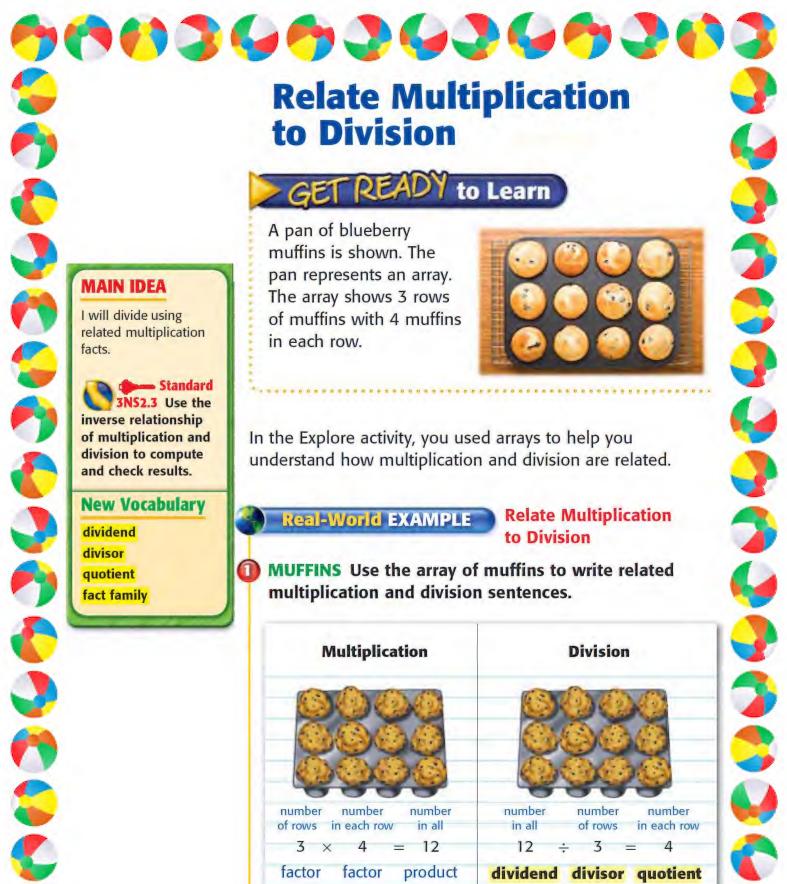


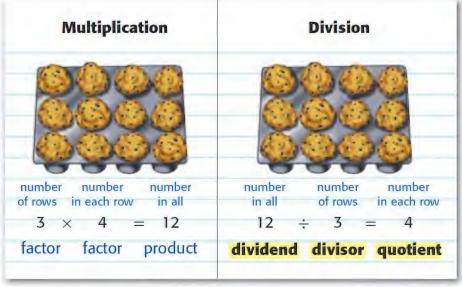












The related multiplication and division sentences are $3 \times 4 = 12$ and $12 \div 3 = 4$.

هذكرات جاهزة للطباعة



fact family.

Fact Family for 3, 4, and 12 Fact Family for 7 and 49

$$3 \times 4 = 12$$
 $4 \times 3 = 12$
 $12 \div 3 = 4$
 $12 \div 4 = 3$

$$7 \times 7 = 49$$

 $49 \div 7 = 7$

Remember

Thinking about numbers in a fact family can help you remember related facts.

つらつむう

EXAMPLE Write a Fact Family

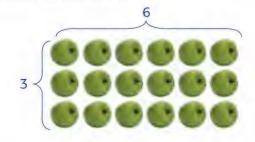
Use the fact family 3, 6, 18 to write four related multiplication and division sentences.

$$3 \times 6 = 18$$

$$6 \times 3 = 18$$

$$18 \div 3 = 6$$

$$18 \div 6 = 3$$



Notice each fact uses the same three numbers.

What You Know

Use the array to complete each pair of number sentences.

1.
$$\times 5 = 15$$

$$\parallel \div 3 = 5$$





Write the fact family for each set of numbers.

3. 2, 6, 12

4. 4, 5, 20

5. 3, 9, 27

6. Gwen has 20 marbles and wants to divide them equally into 5 bags. How many bags will she need?











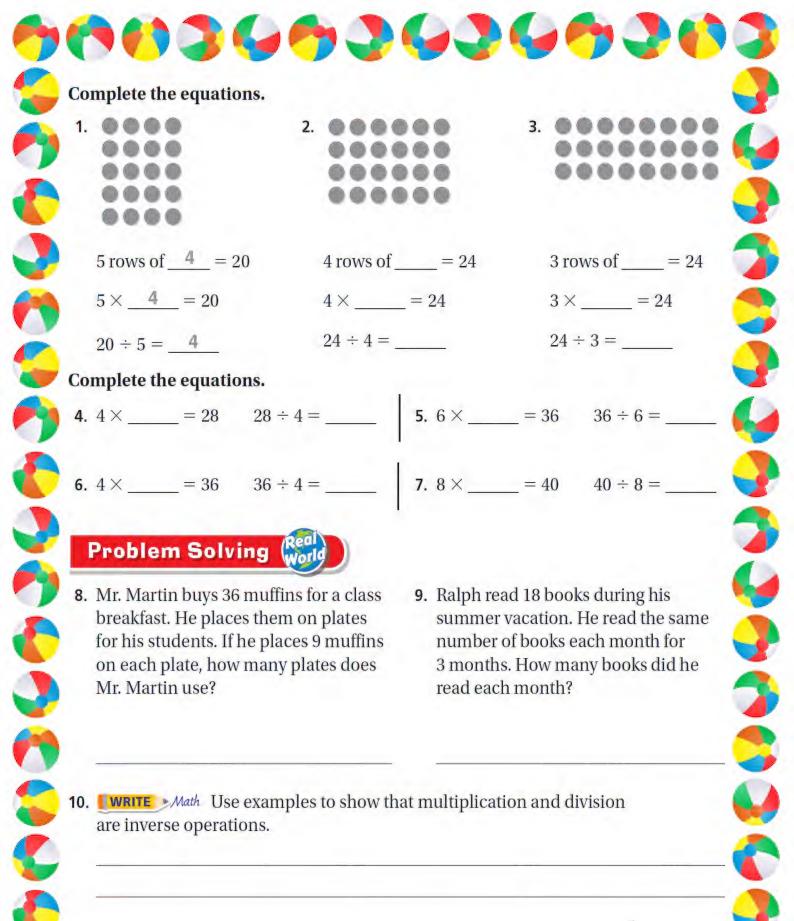




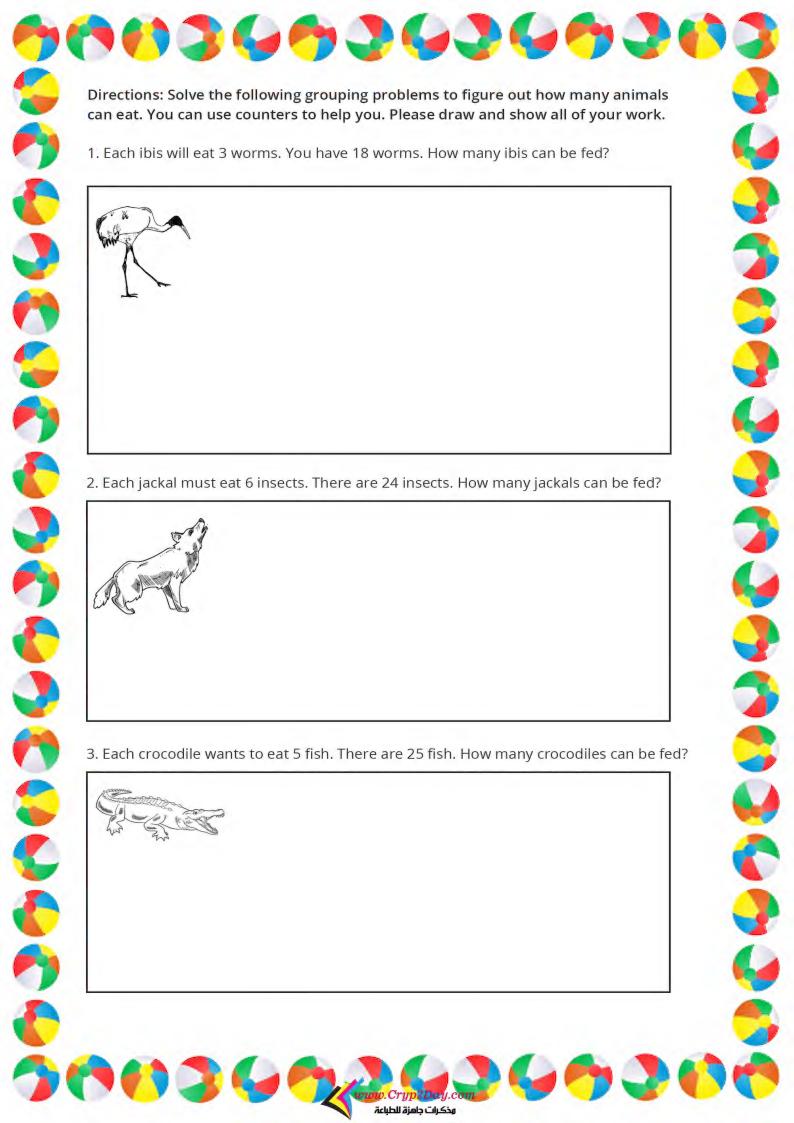


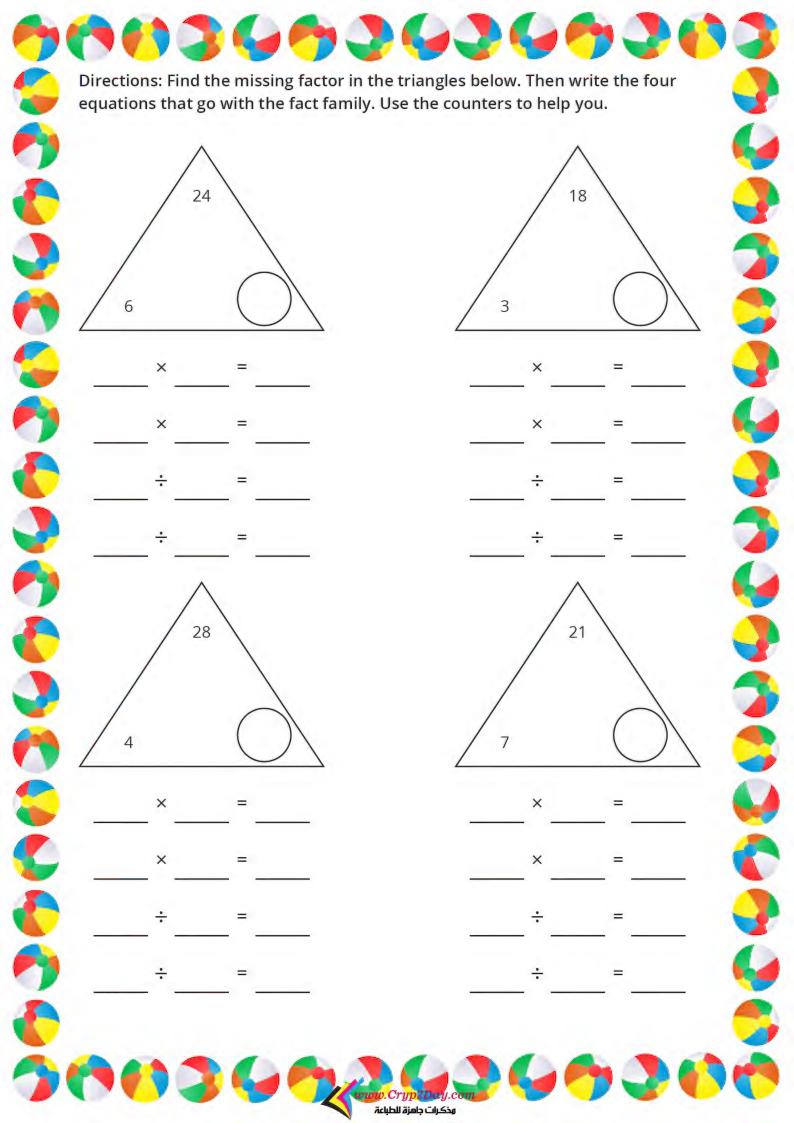


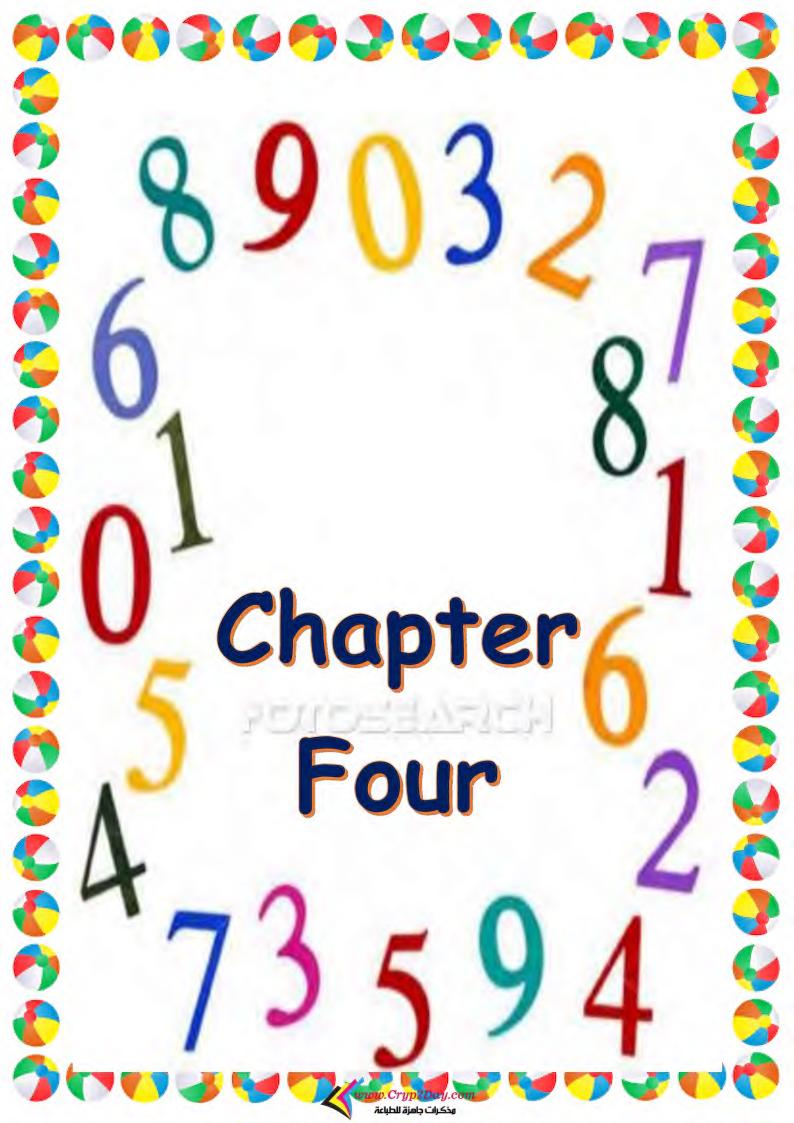


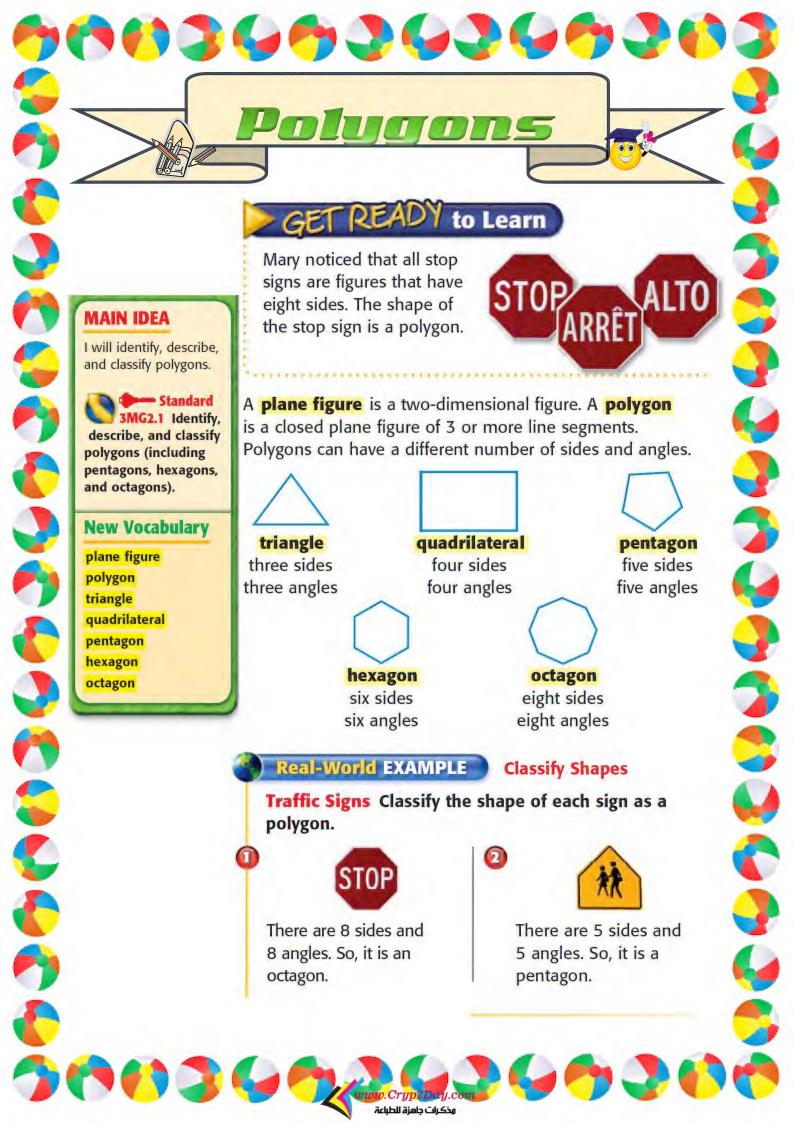


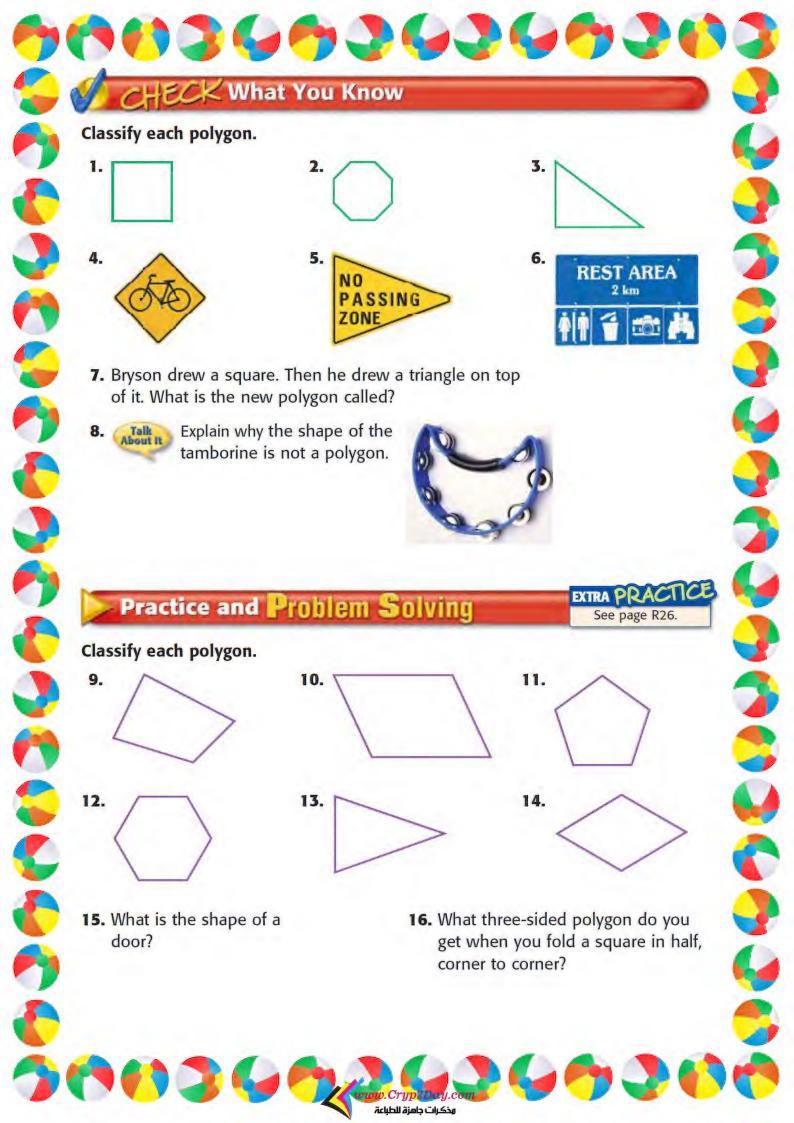
وذكرات جامزة للطباعة

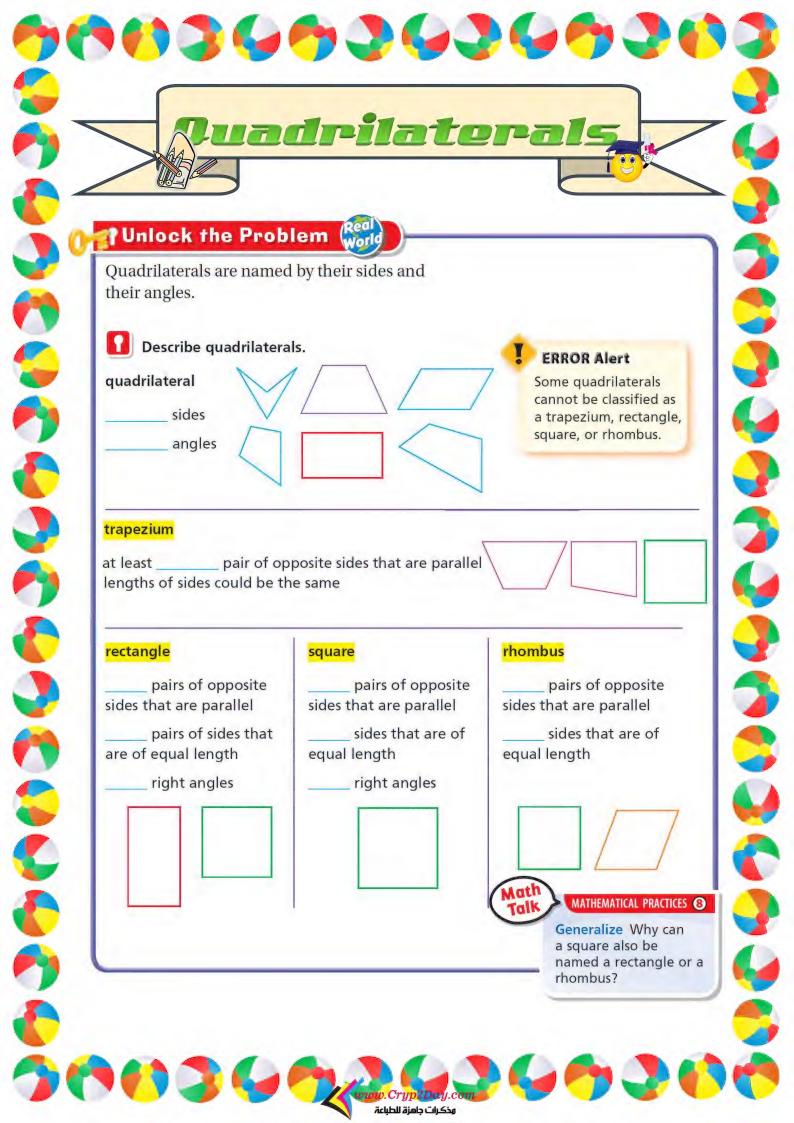


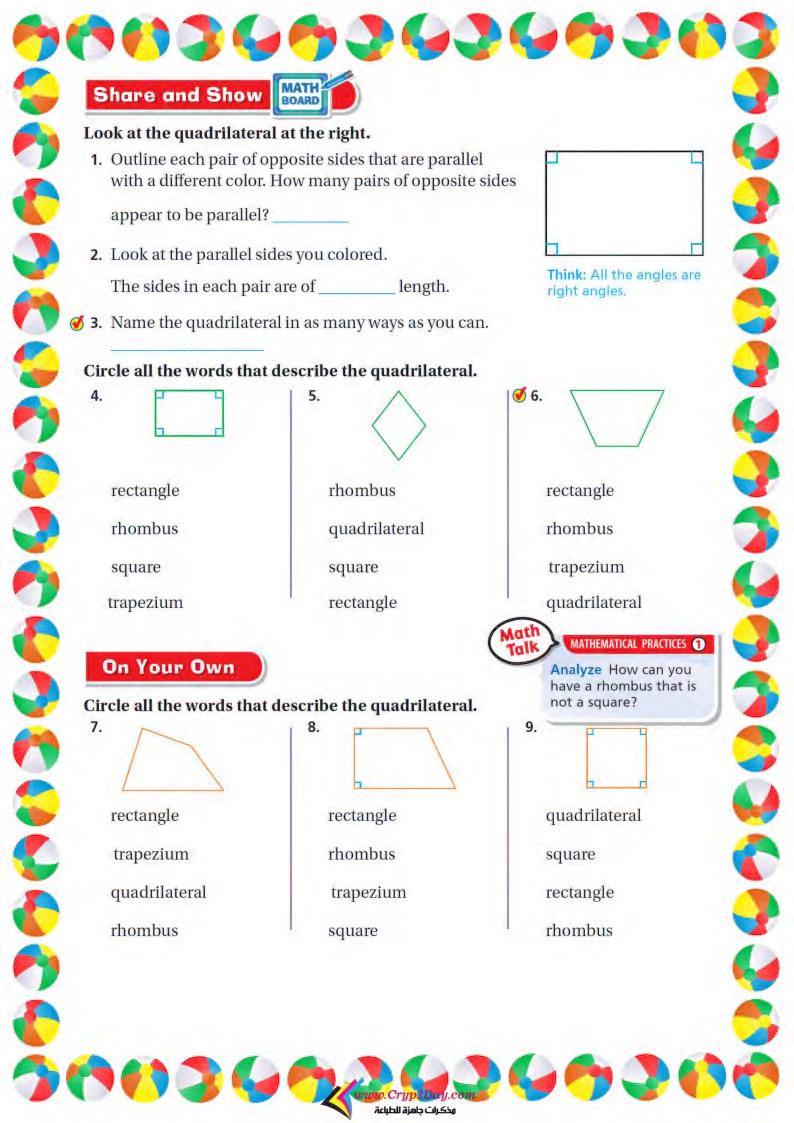


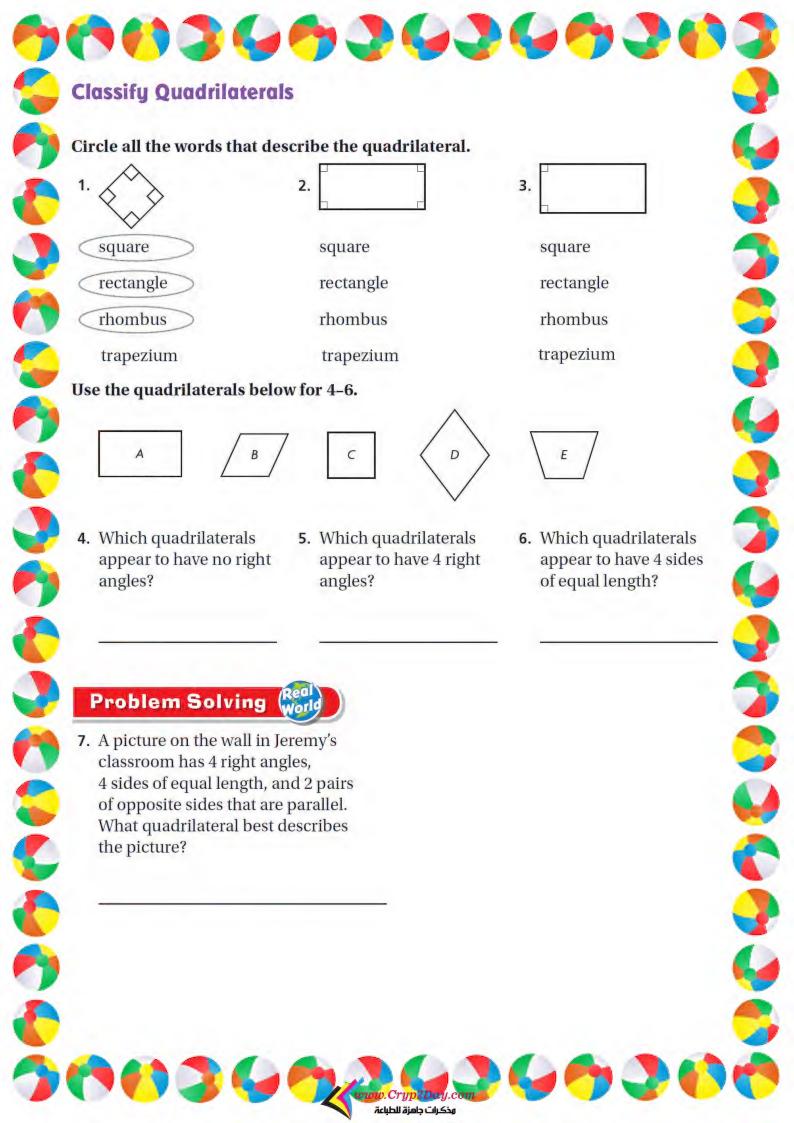


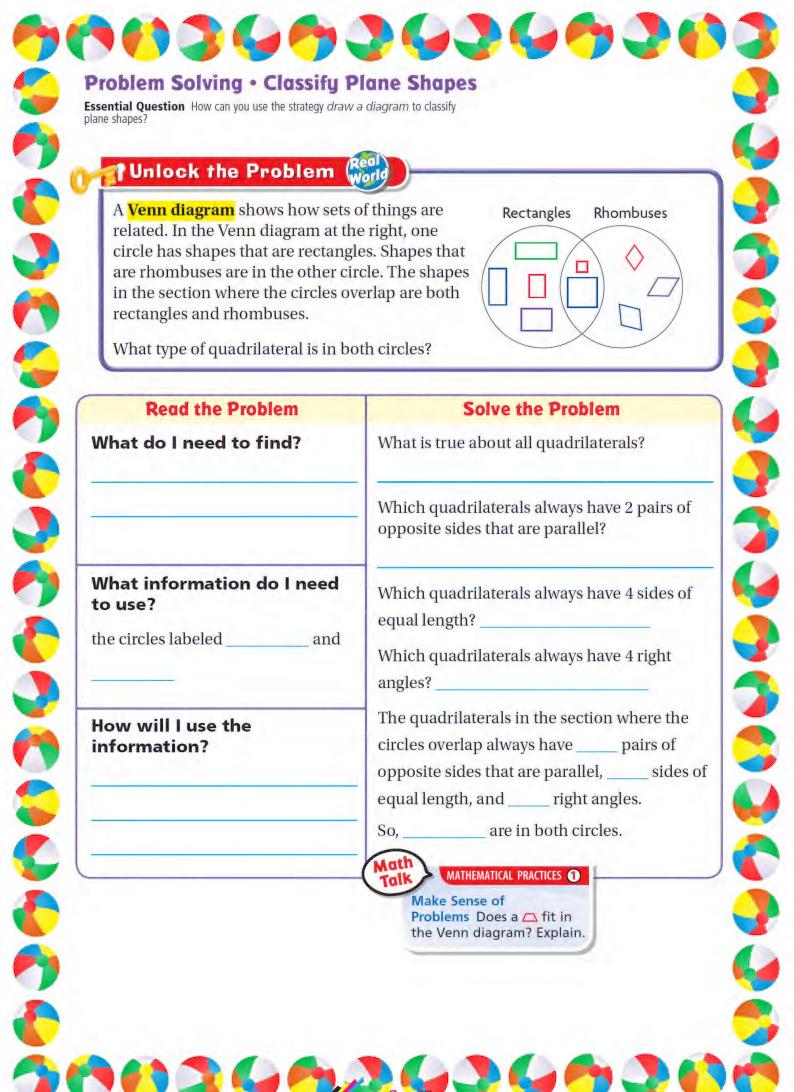




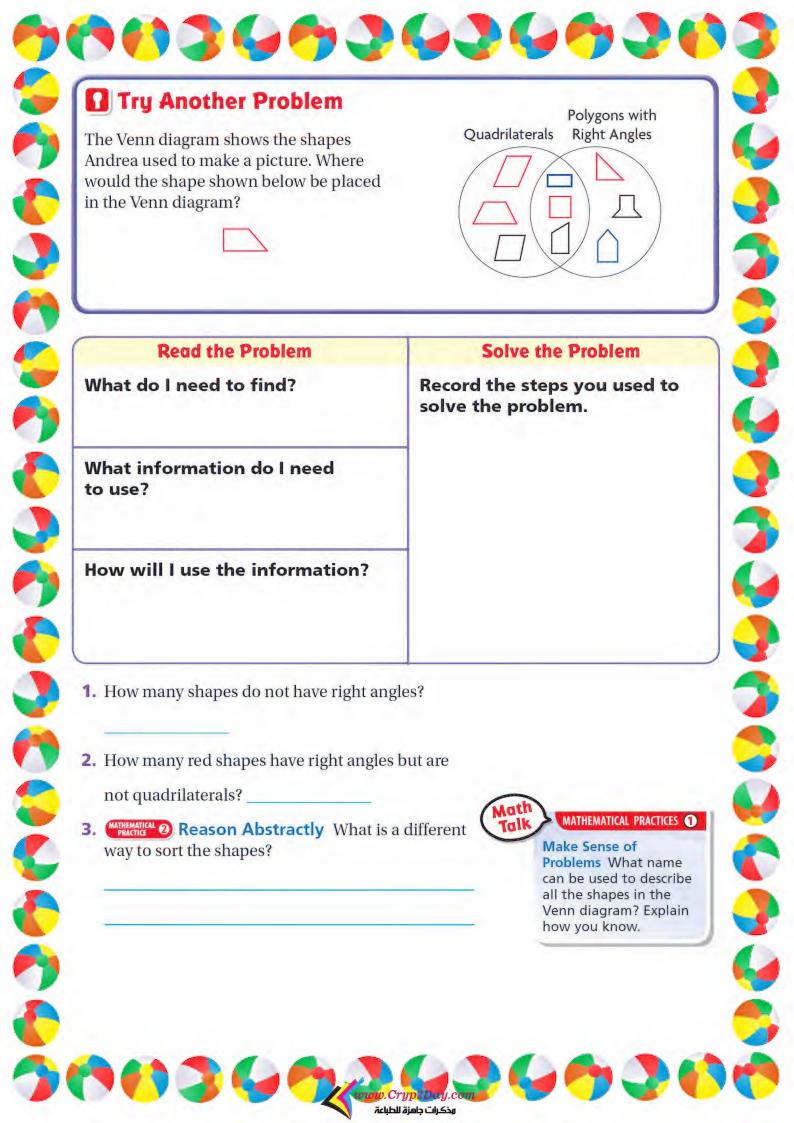


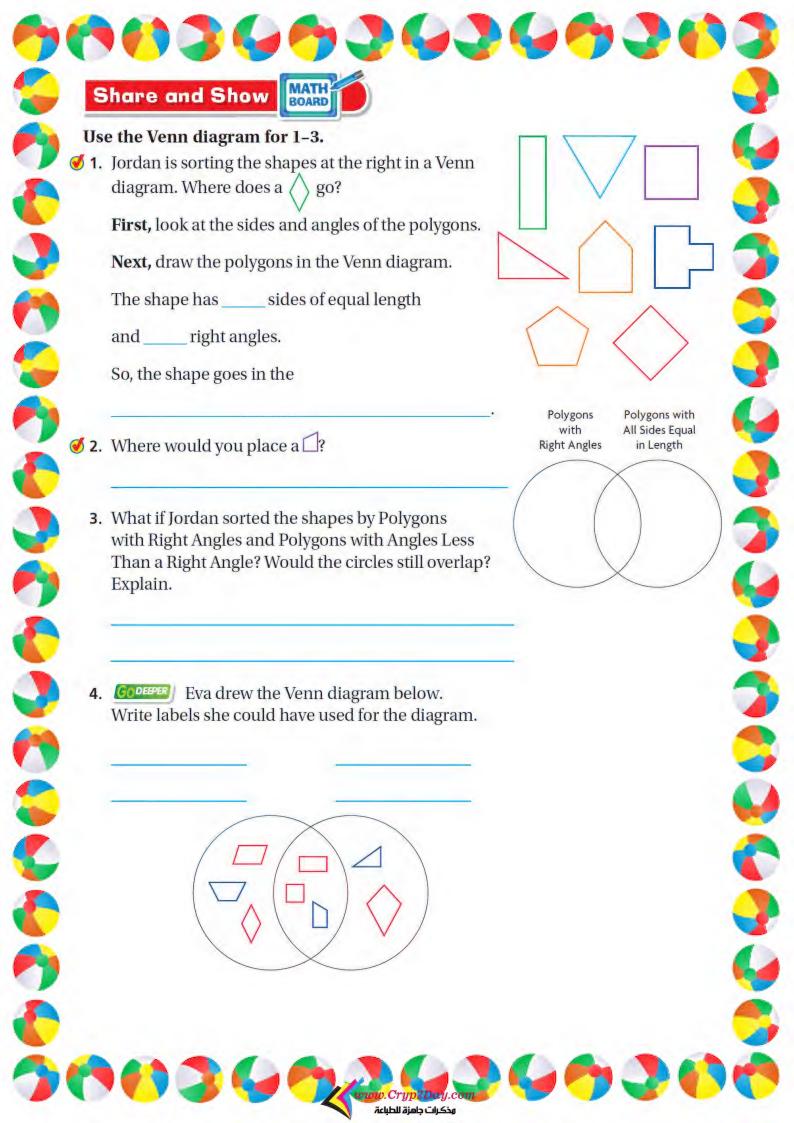


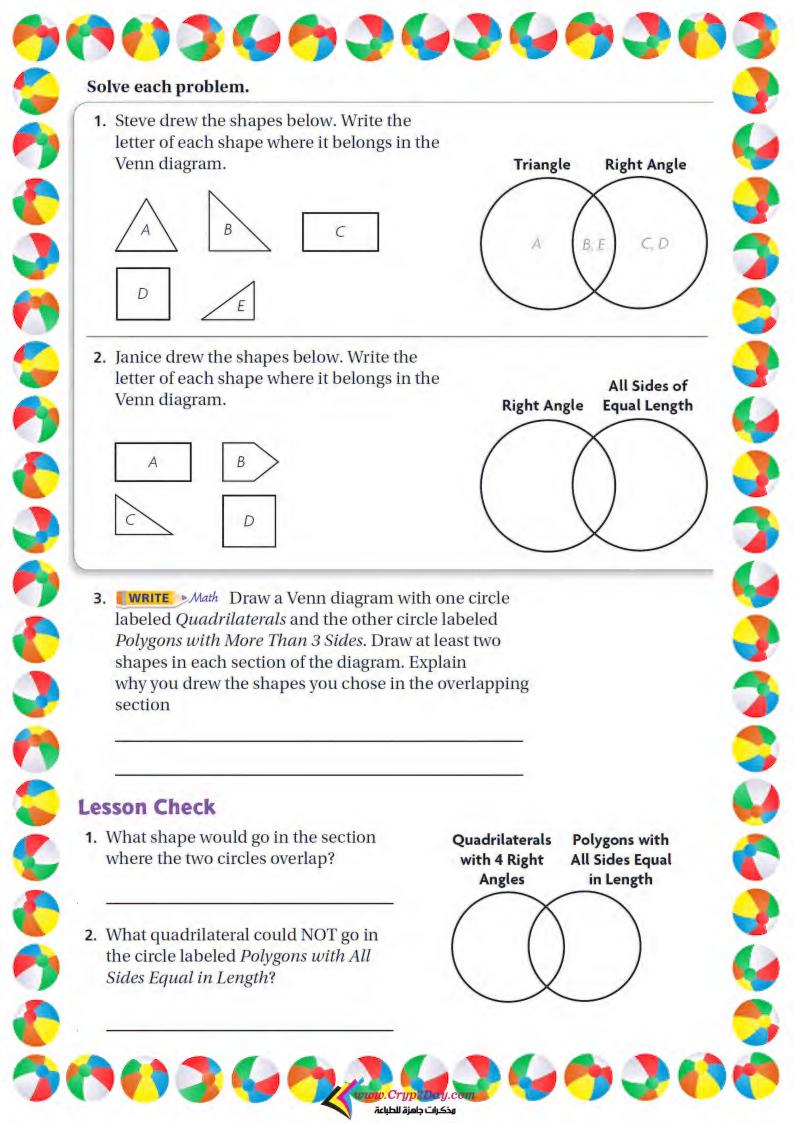


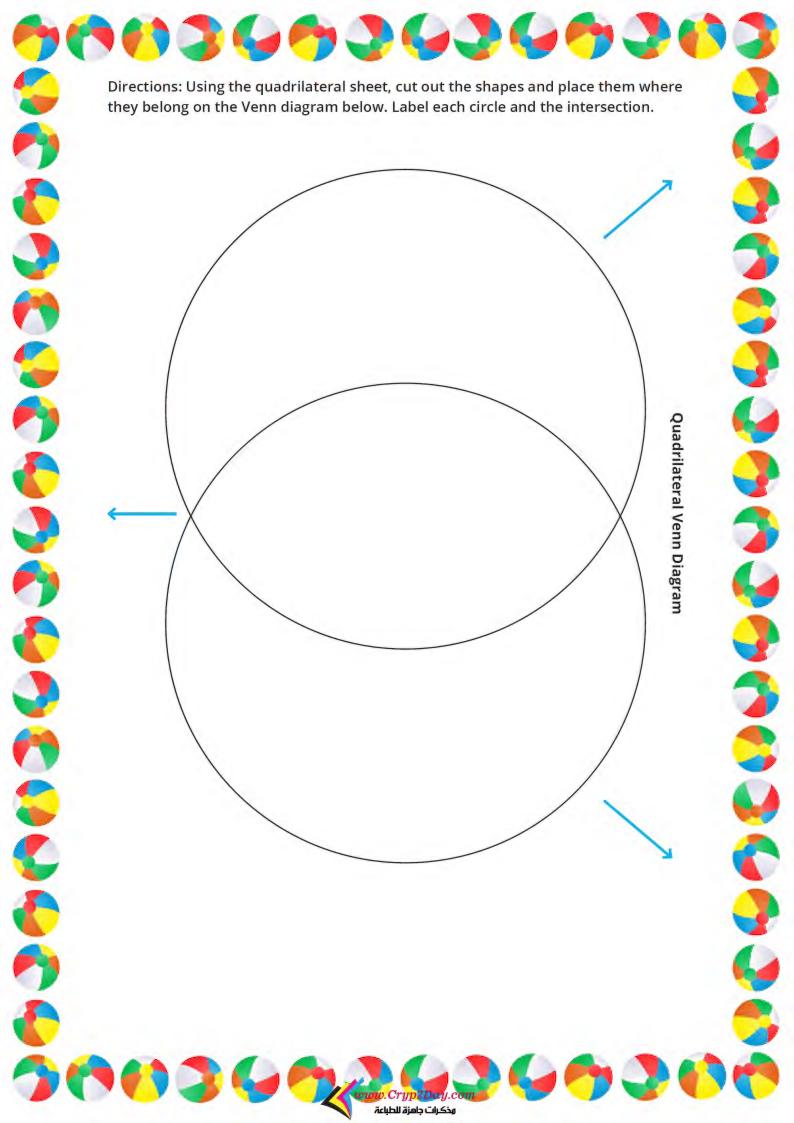


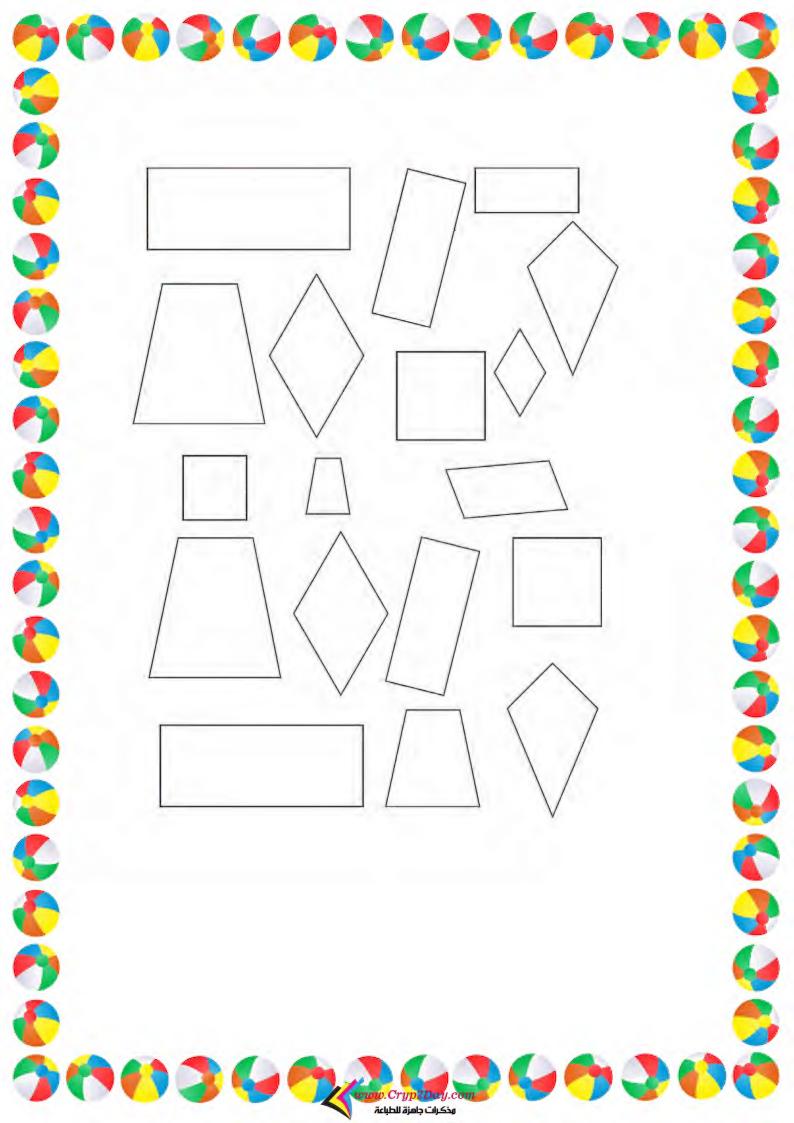
وذكرات جامزة للطباعة

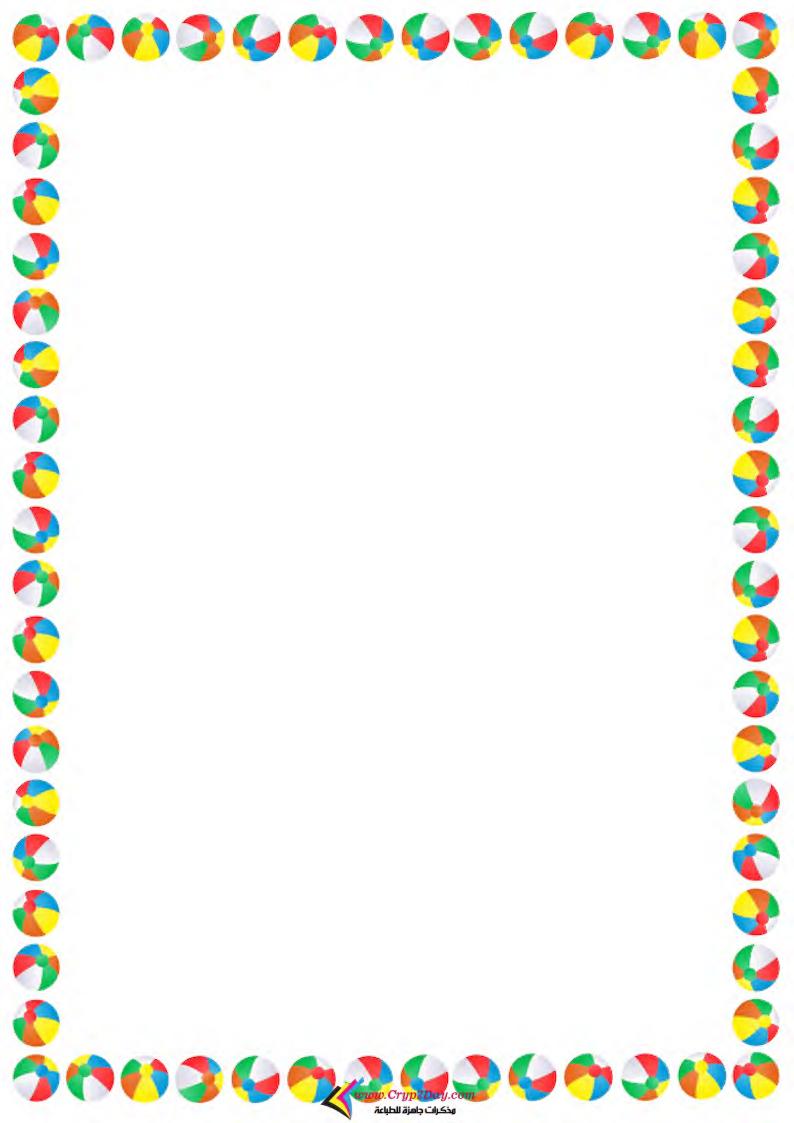




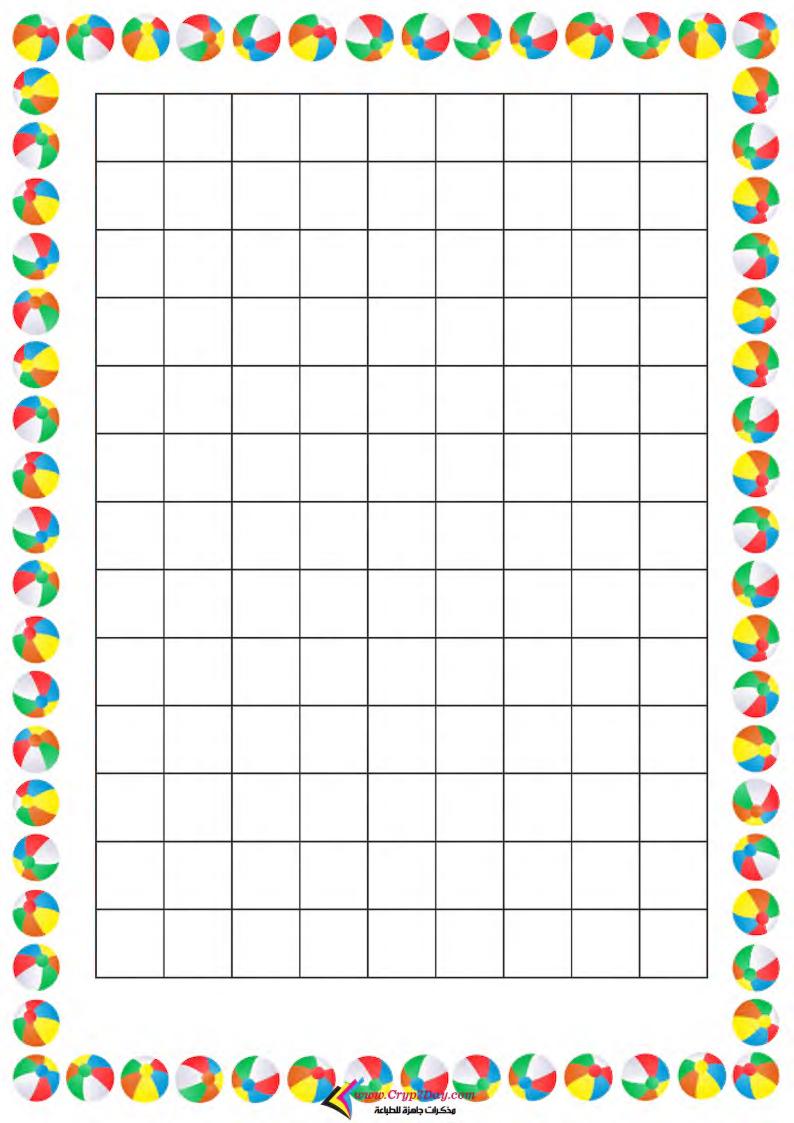


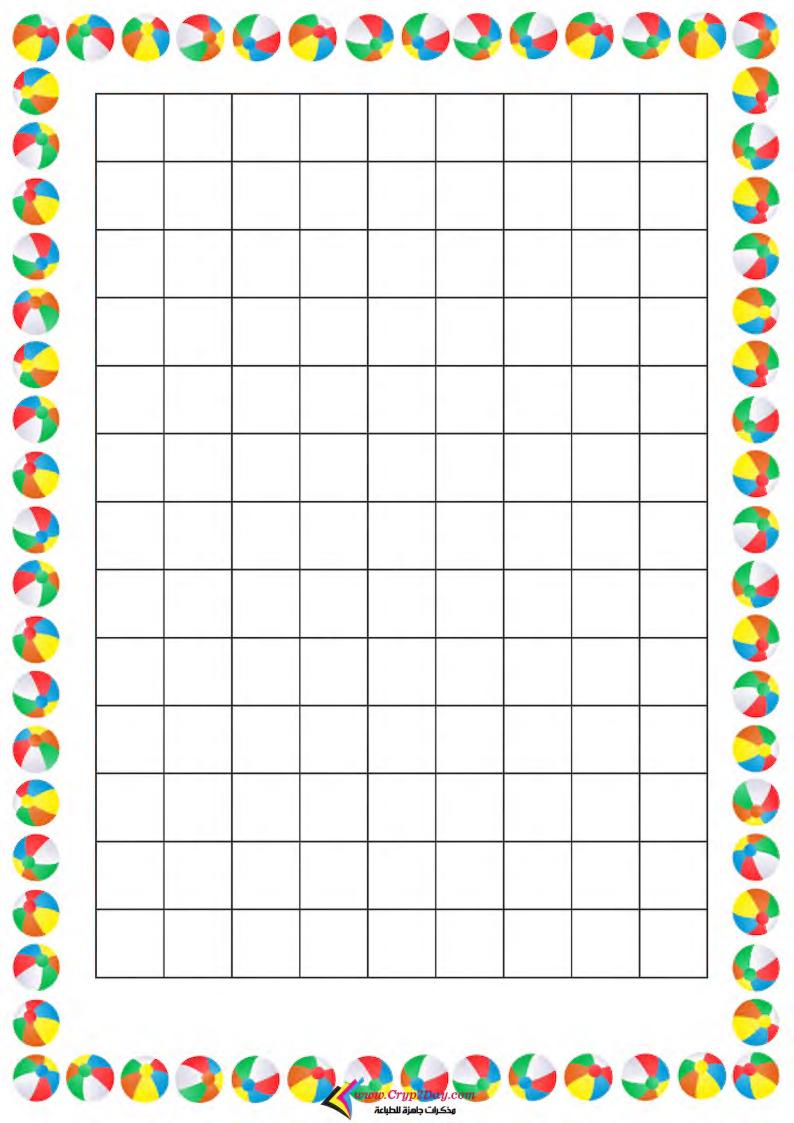


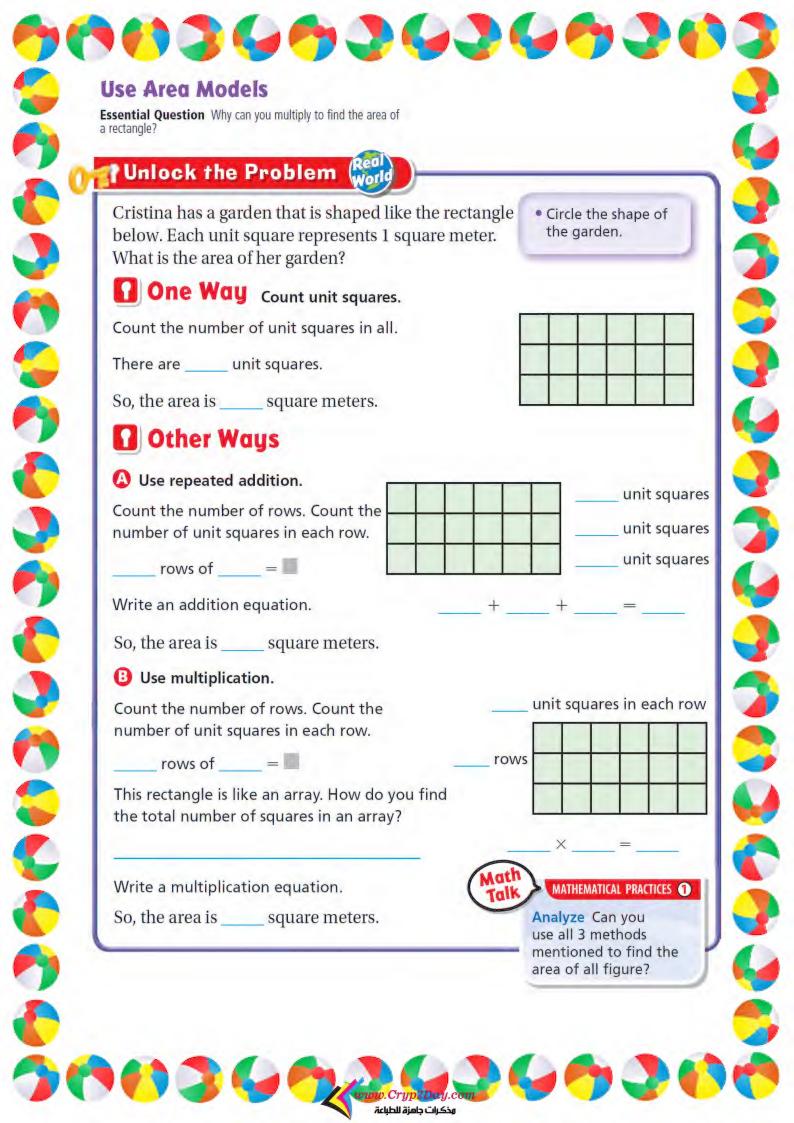


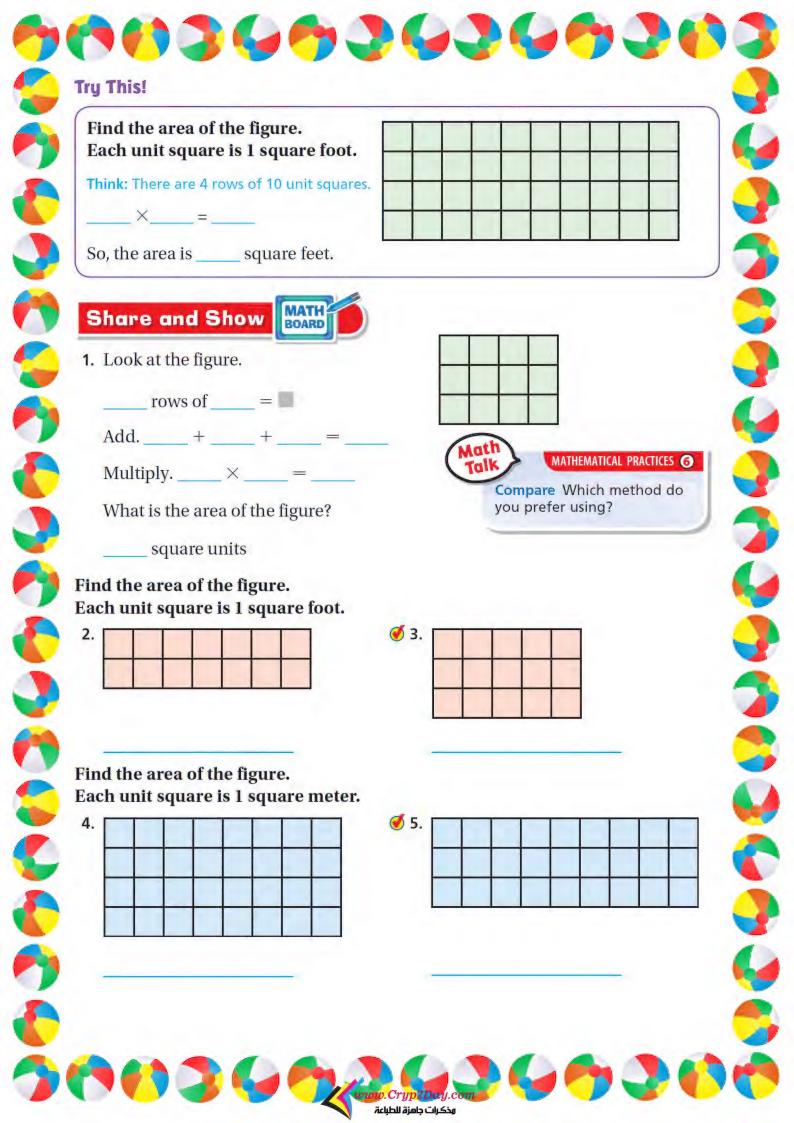


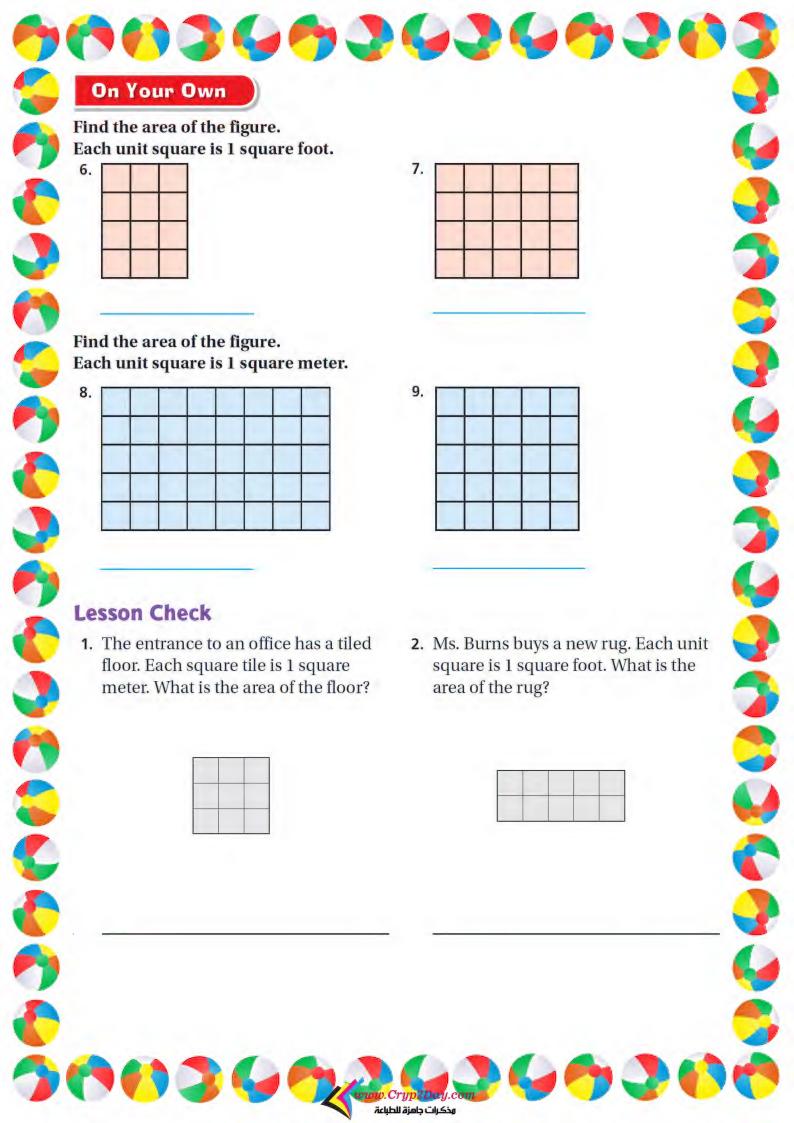


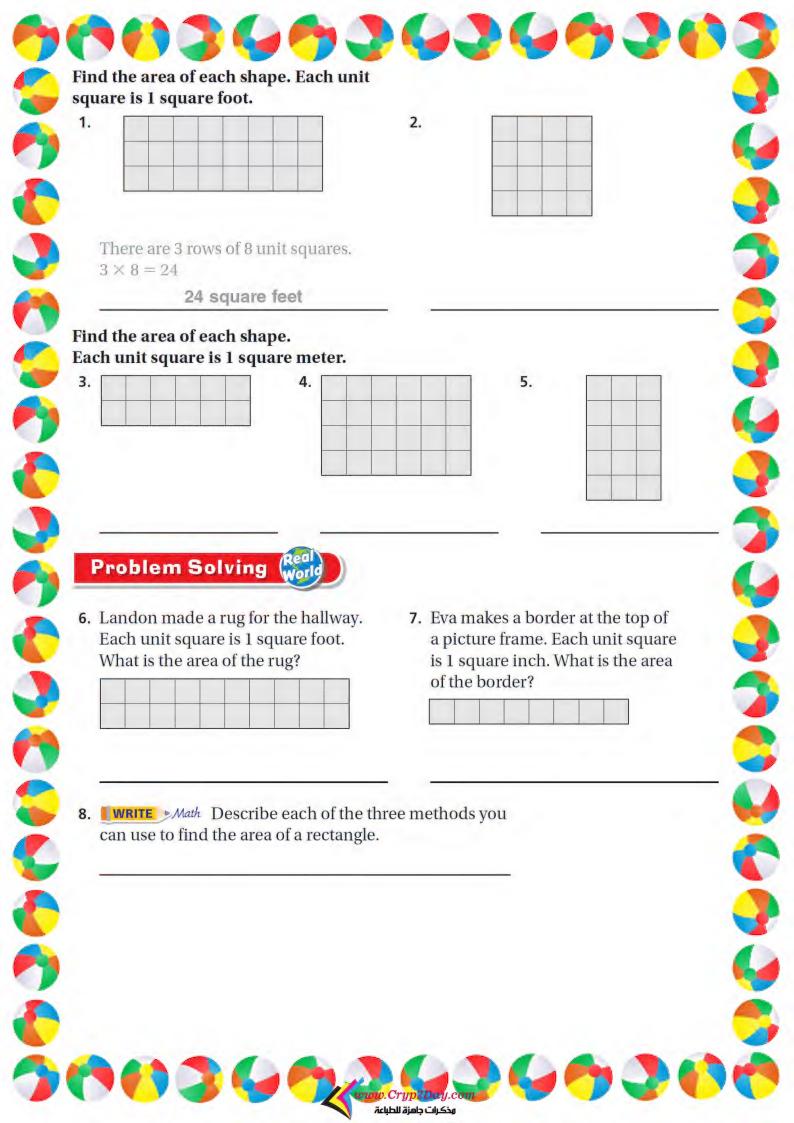


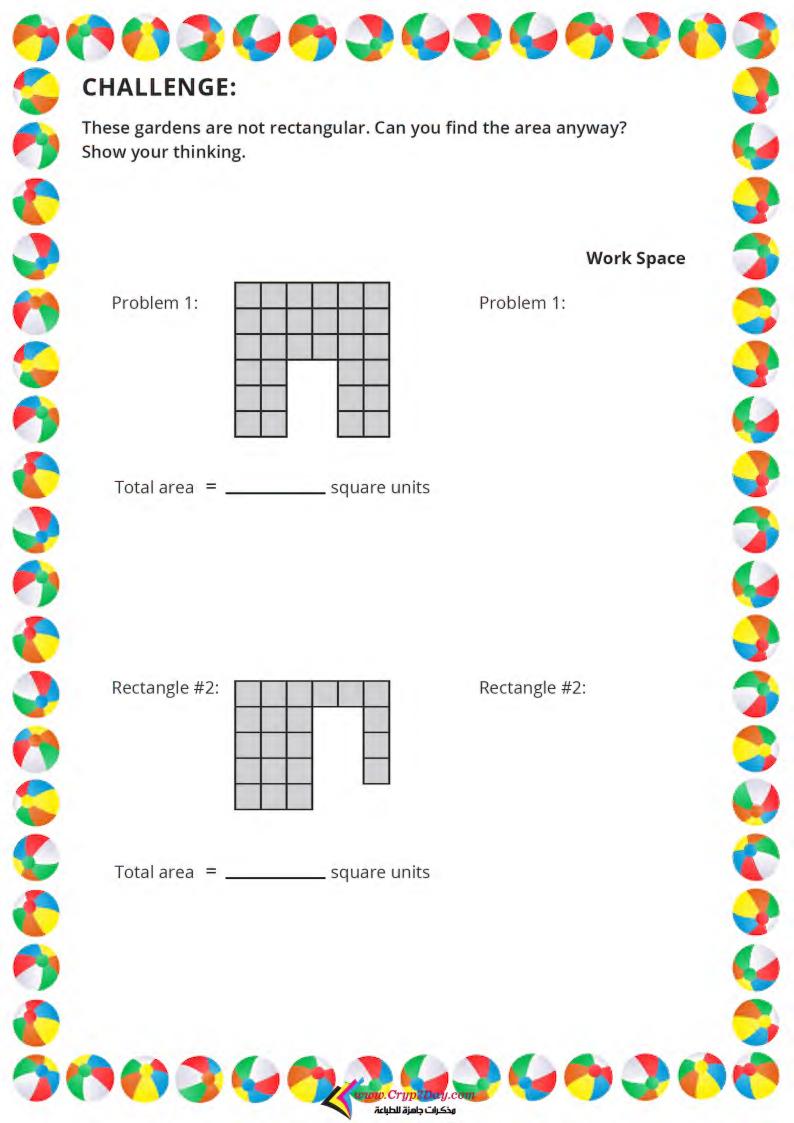


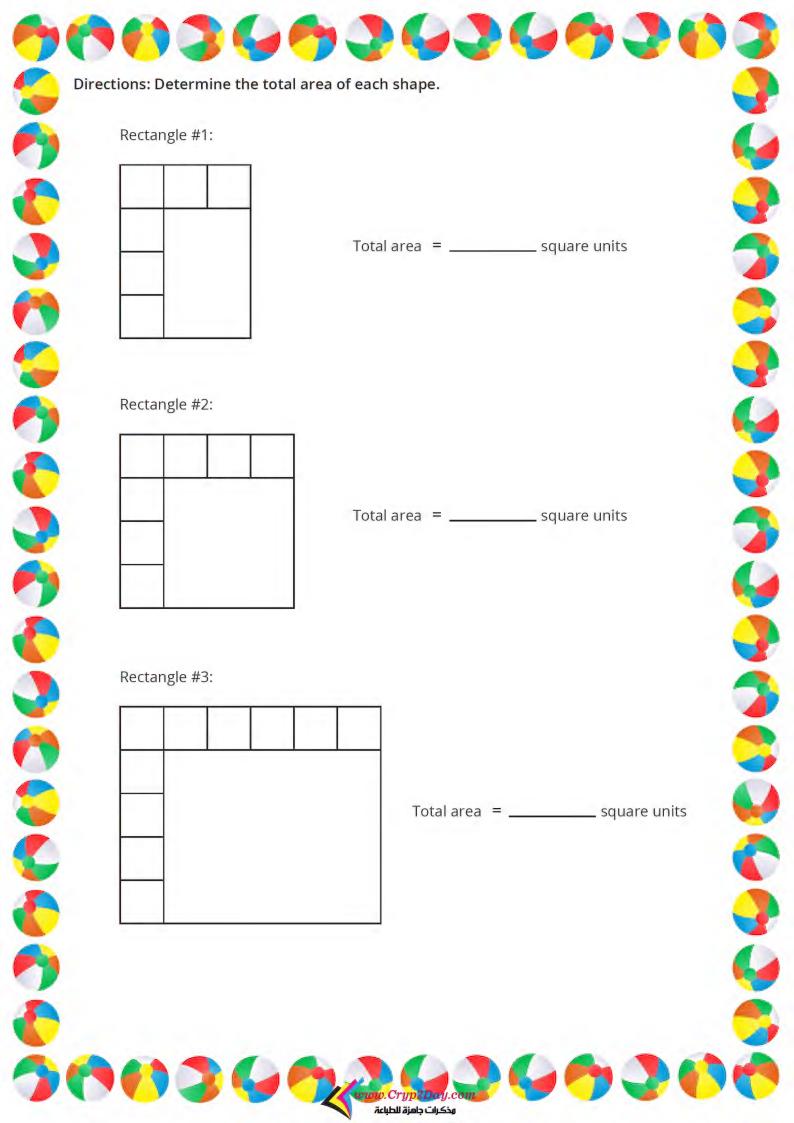


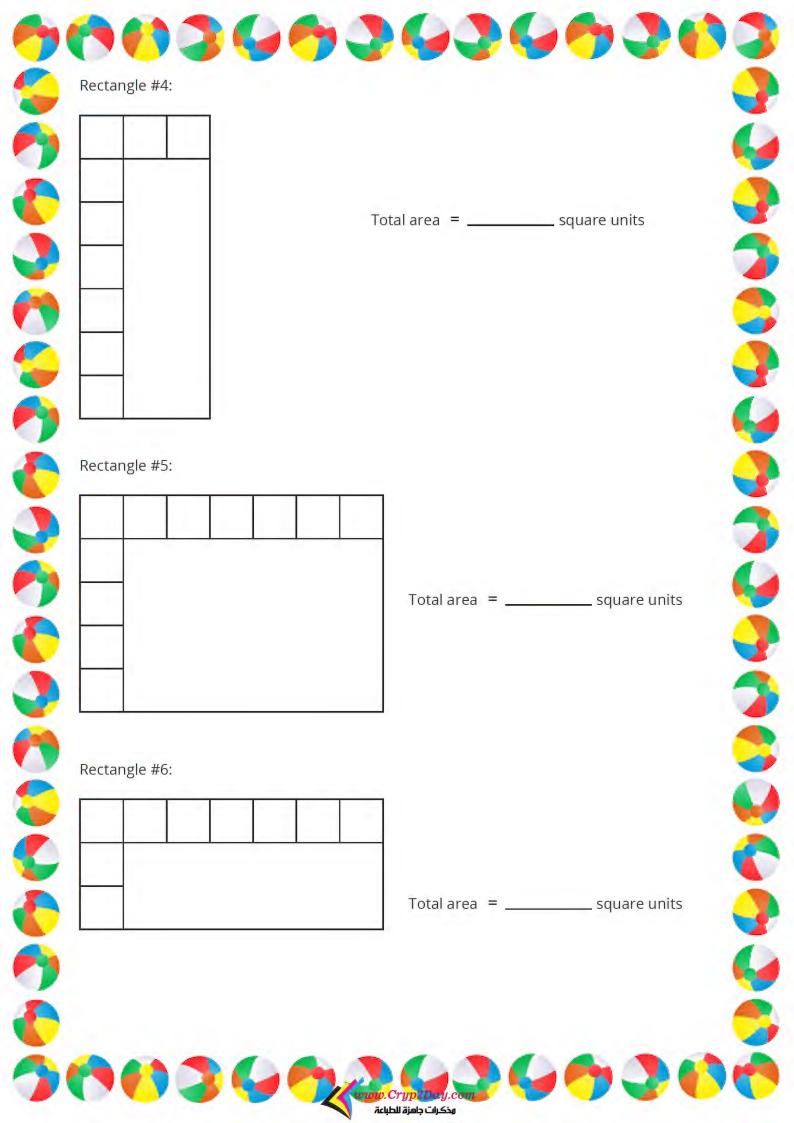


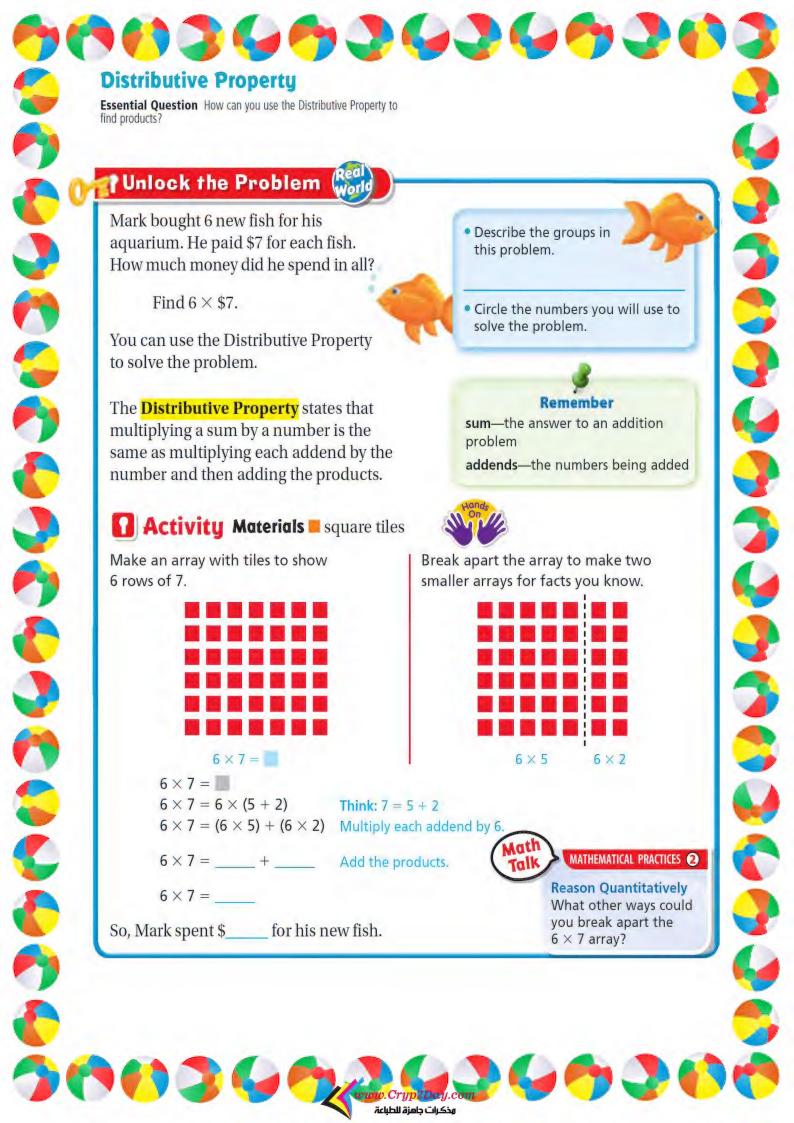


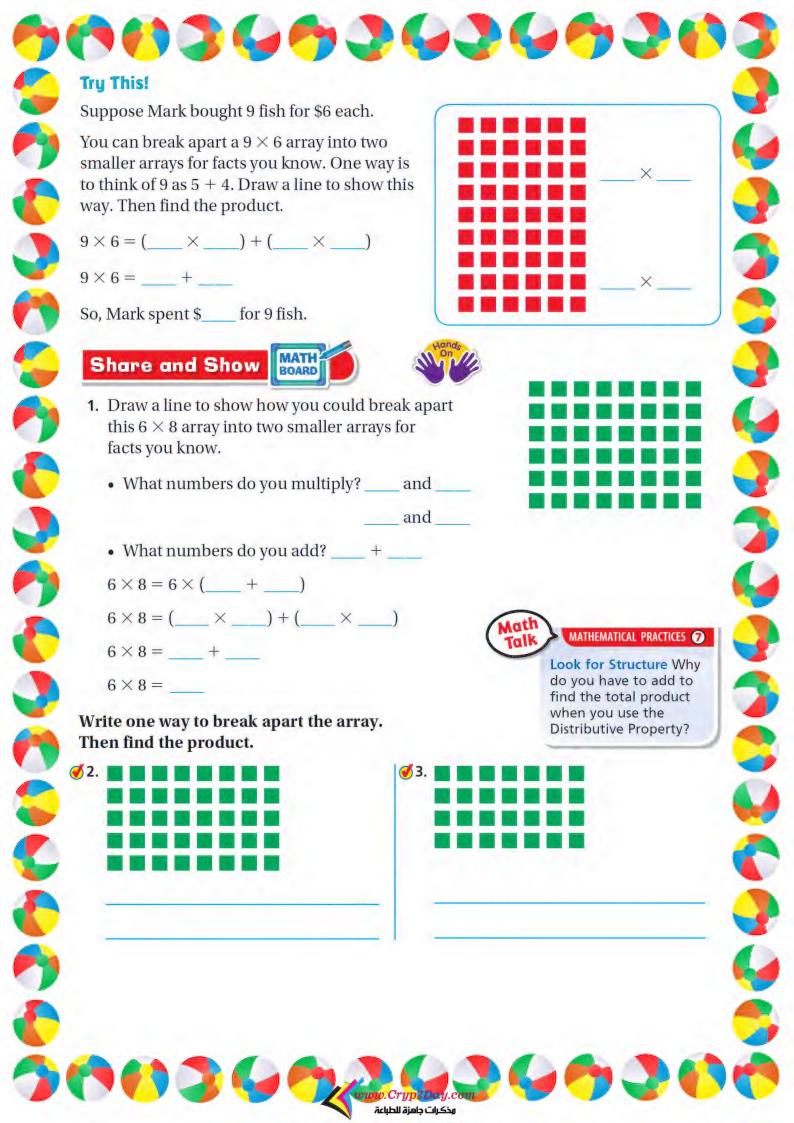


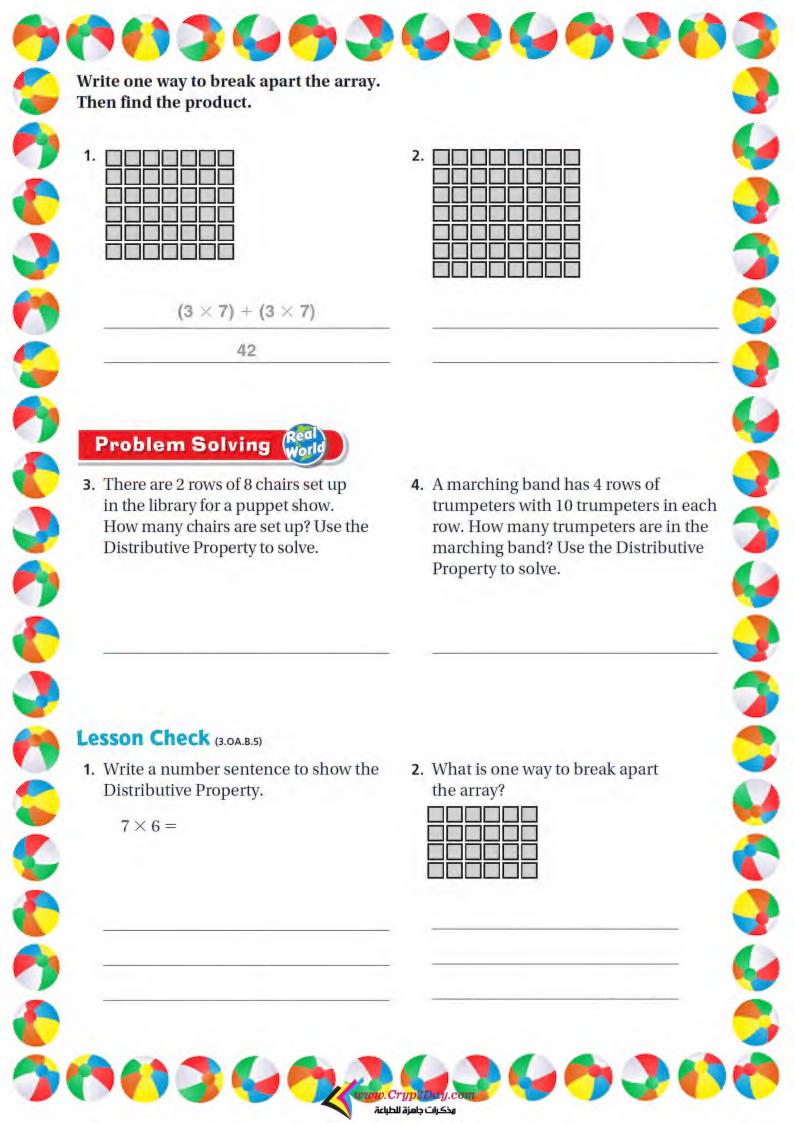


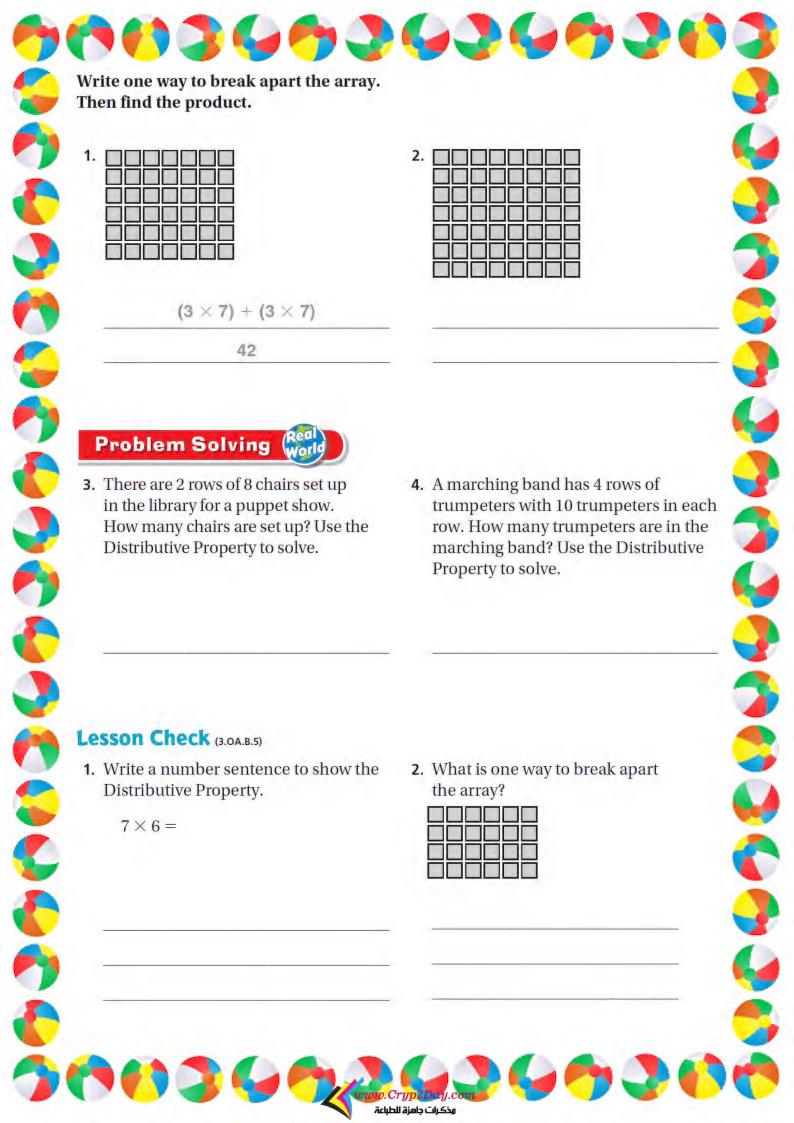


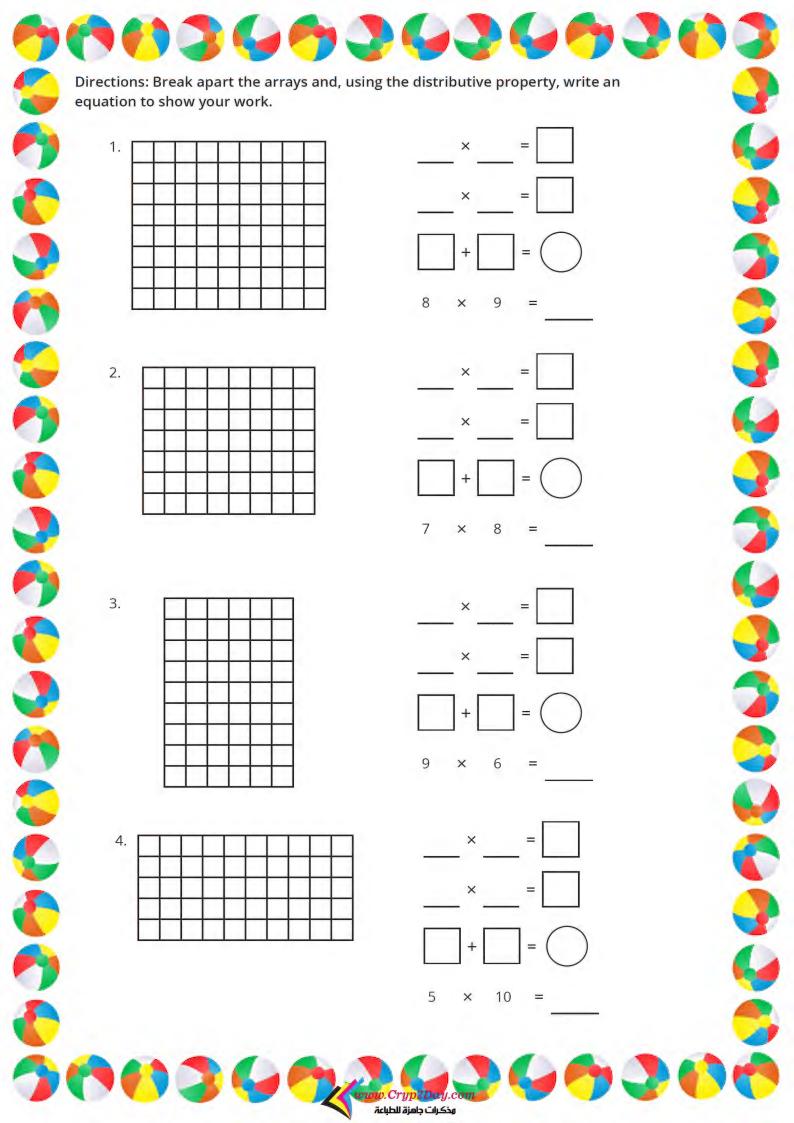




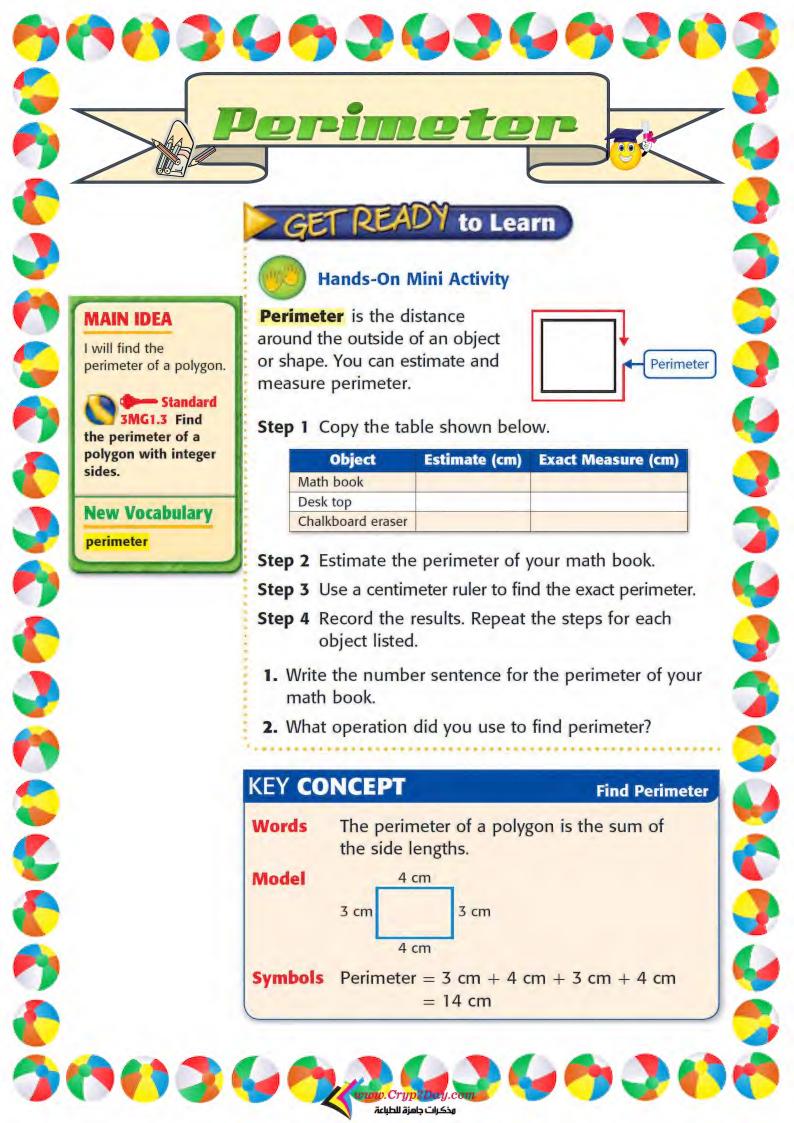


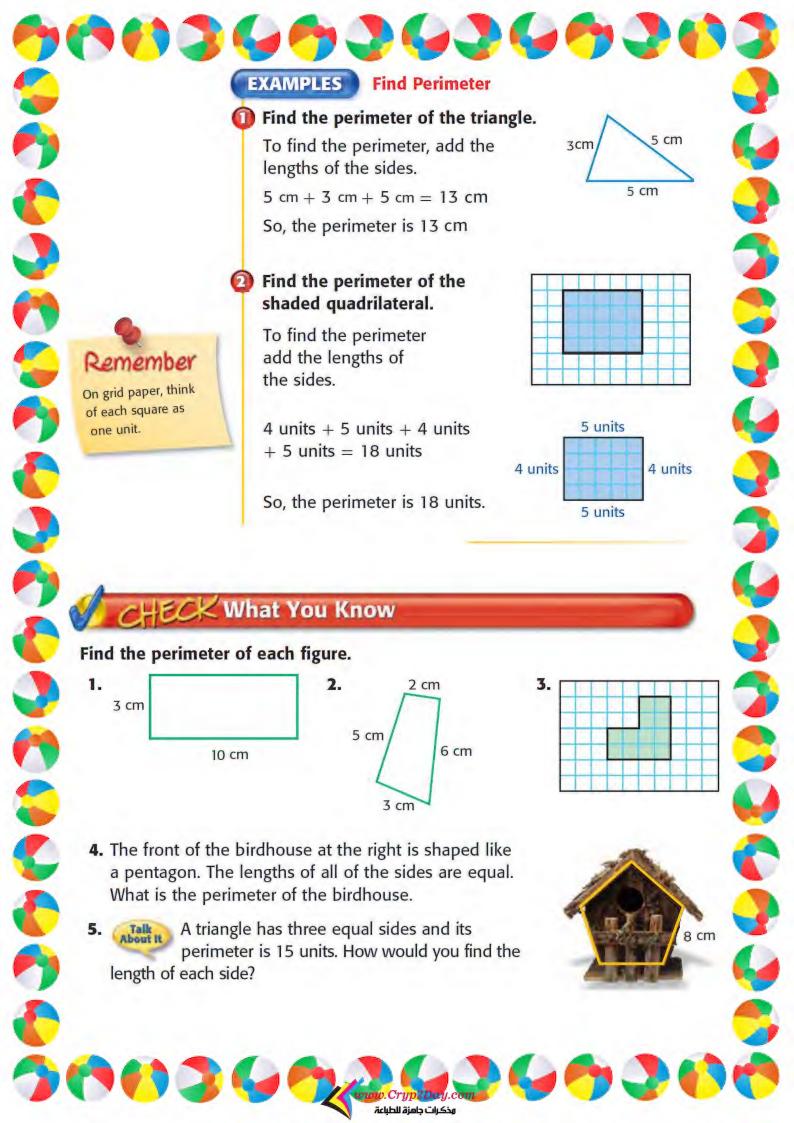


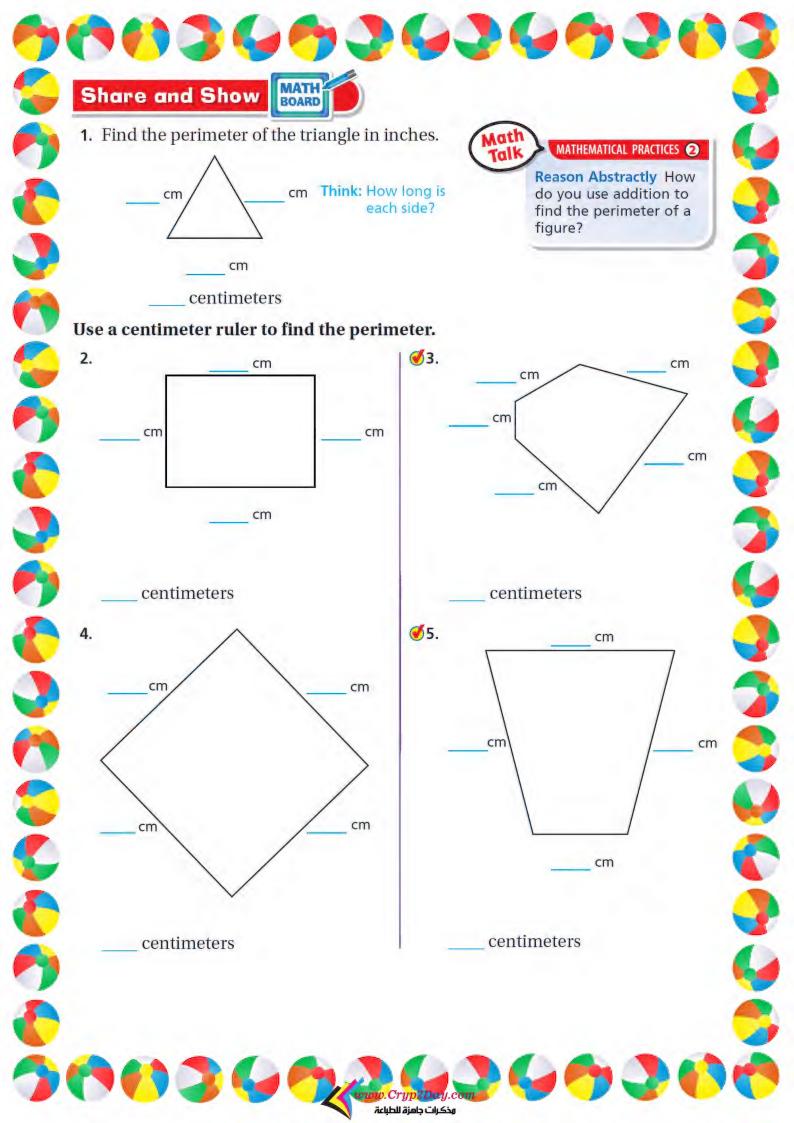


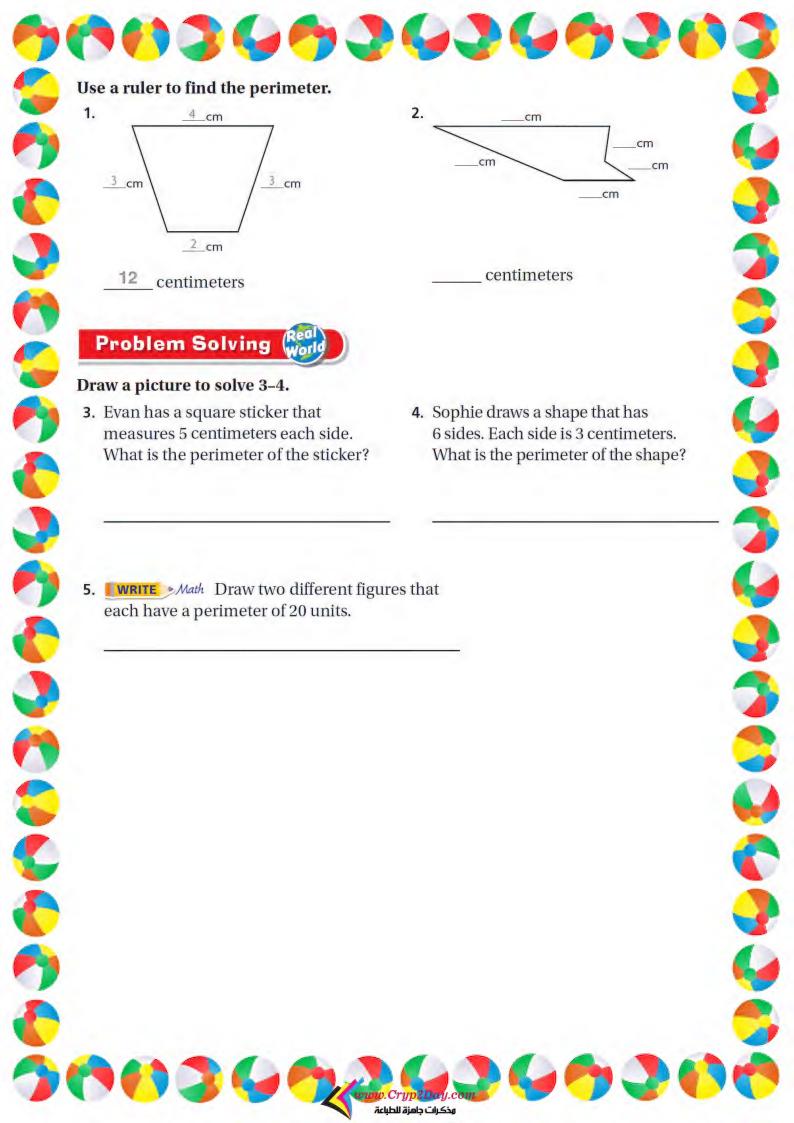


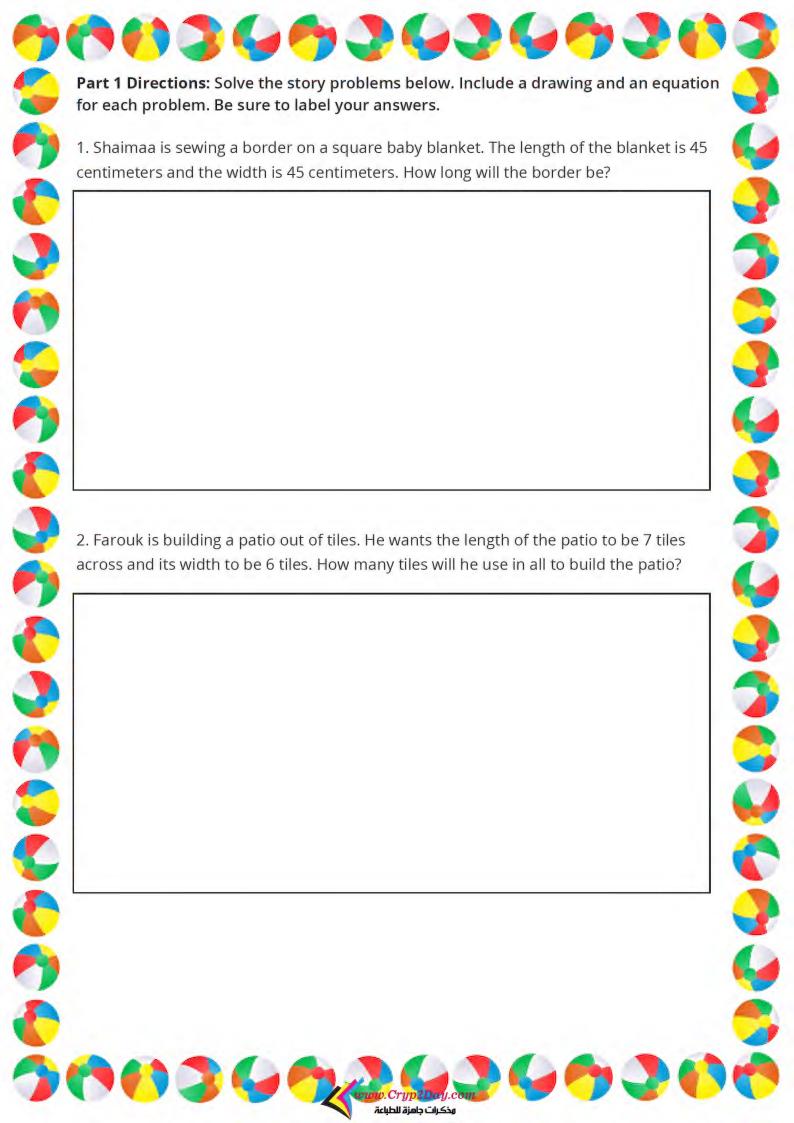


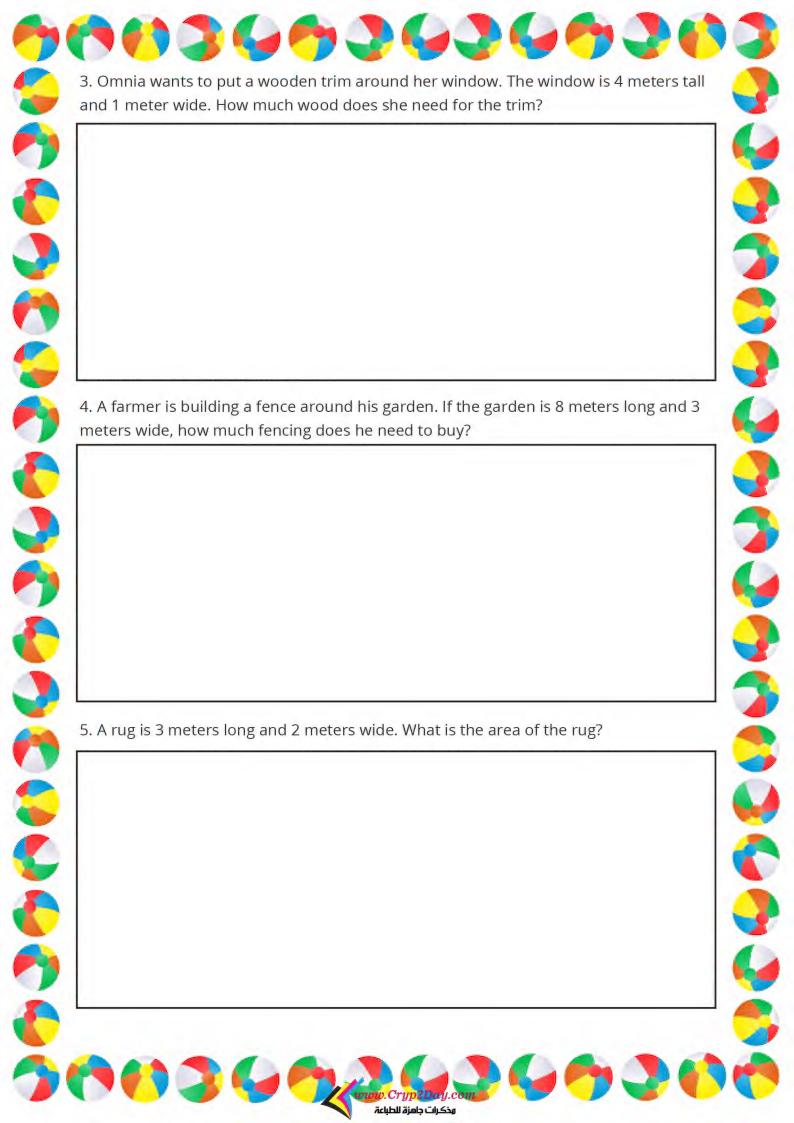


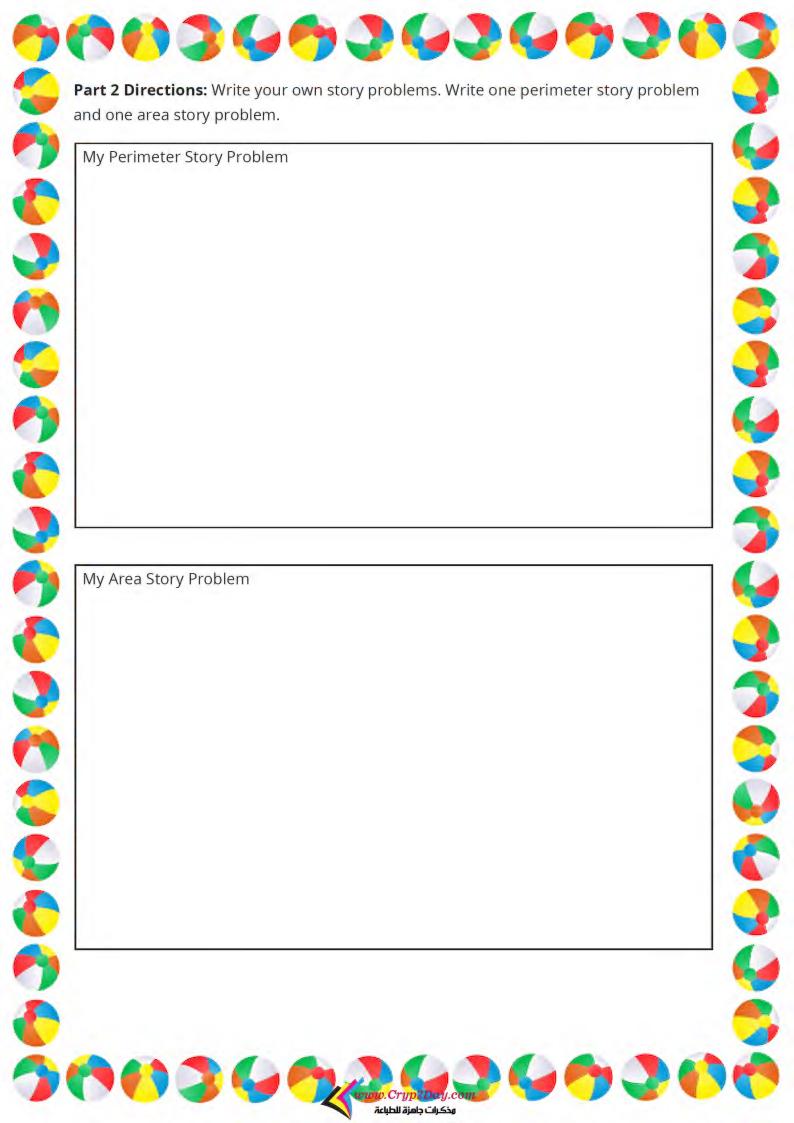


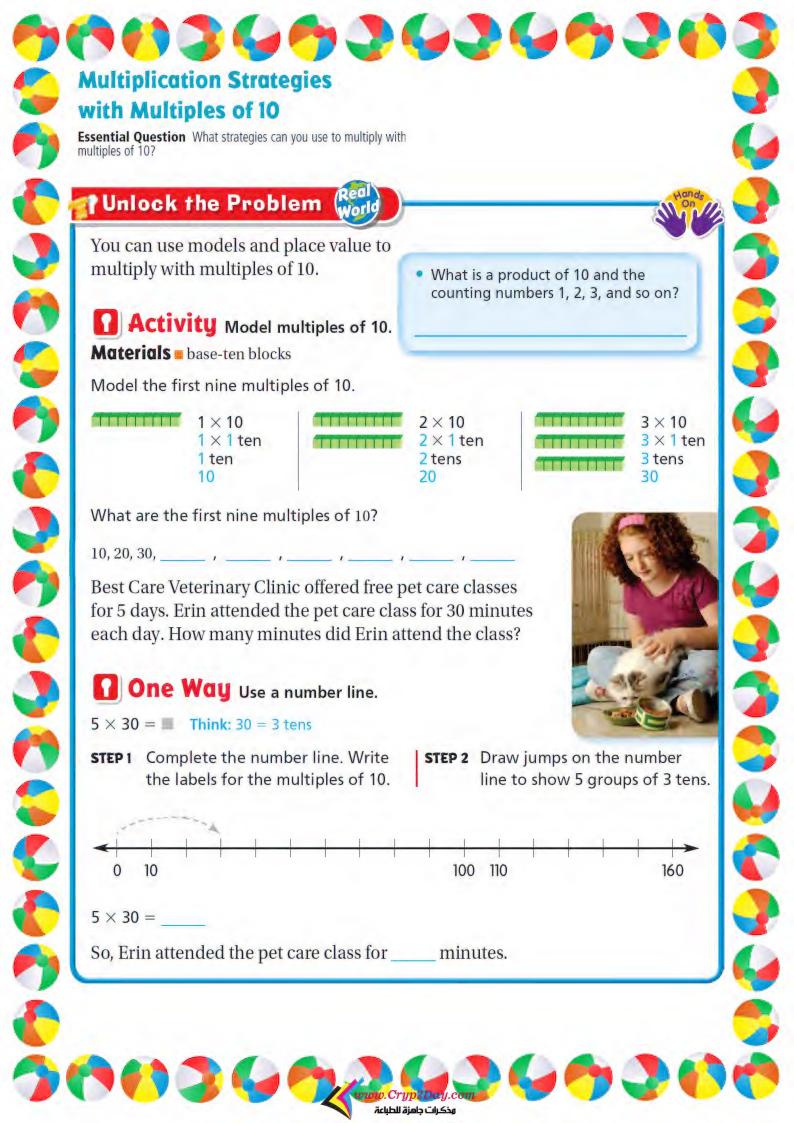


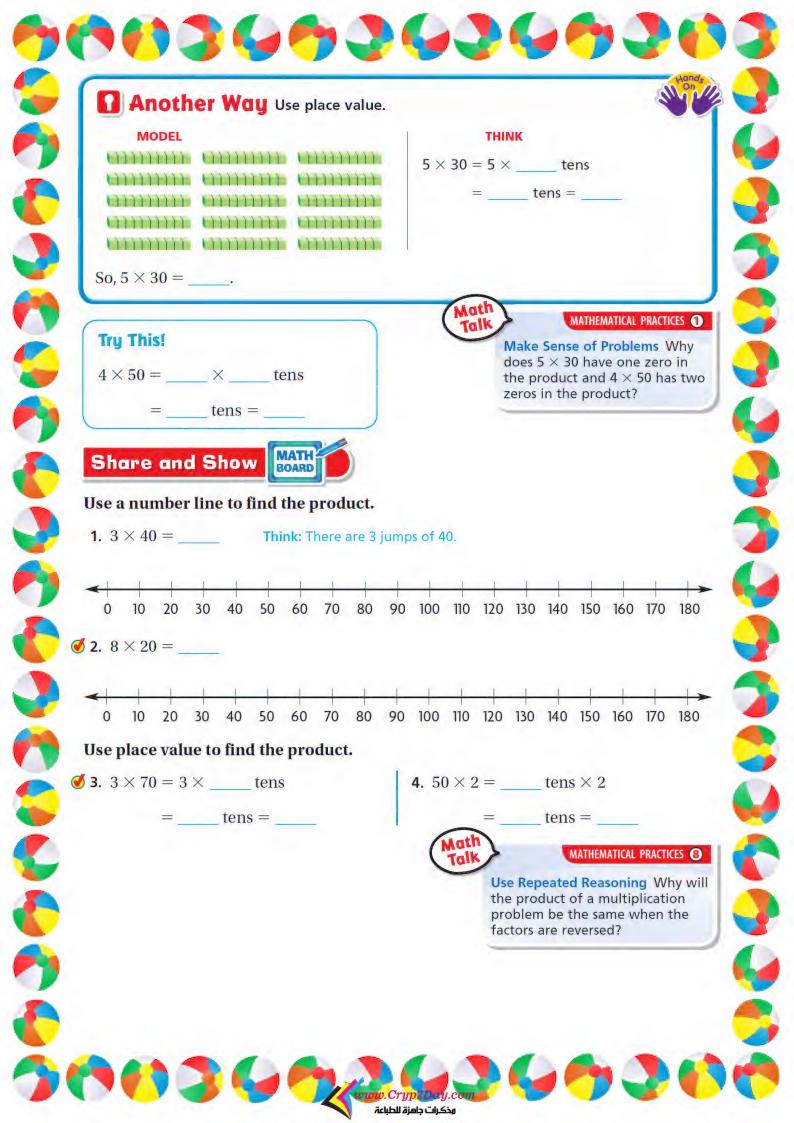




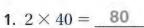


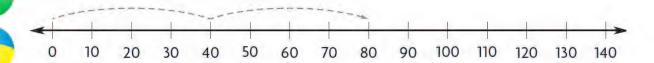






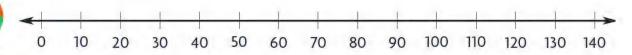






2.
$$4 \times 30 =$$

3000



Use place value to find the product.

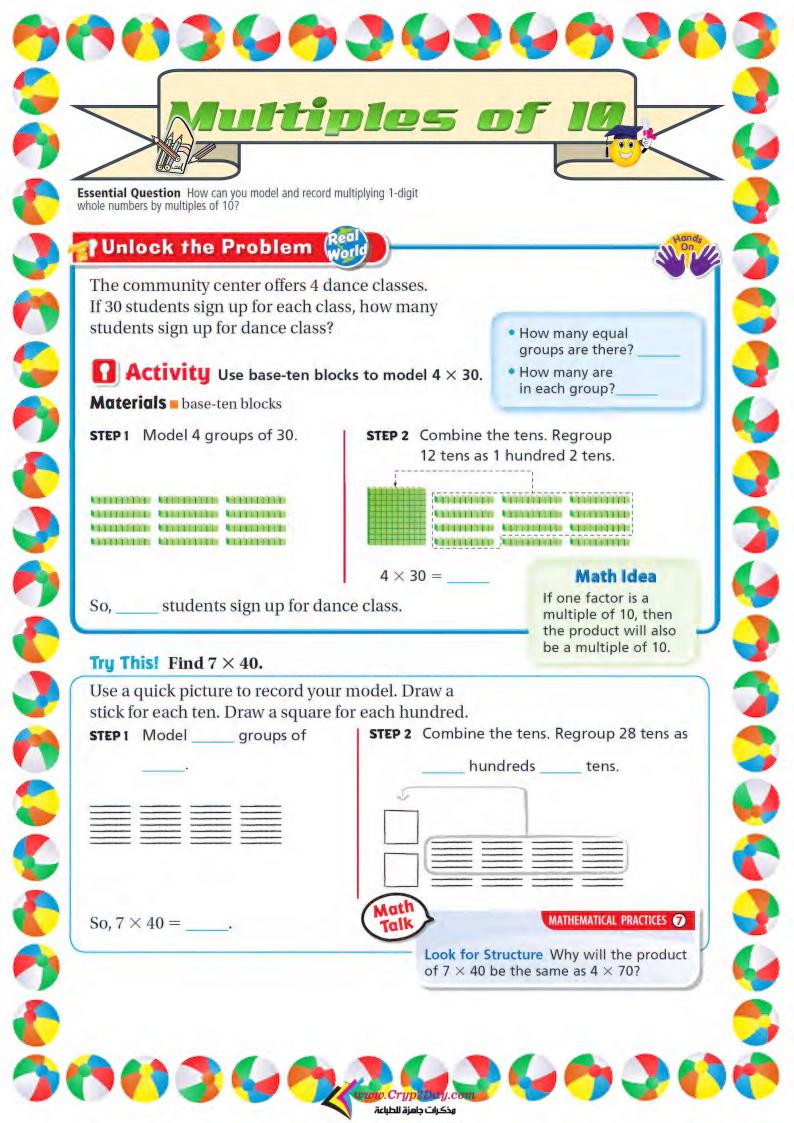
3.
$$5 \times 70 = 5 \times$$
_____ tens = _____

4.
$$60 \times 4 =$$
_____ tens $\times 4$
= ____ tens = ____

Problem Solving (World

- 5. One exhibit at the aquarium has 5 fish tanks. Each fish tank holds 50 gallons of water. How much water do the 5 tanks hold?
- **6.** In another aquarium display, there are 40 fish in each of 7 large tanks. How many fish are in the display?
- 7. WRITE Math Which strategy do you prefer to use to multiply with multiples of 10: base ten blocks, a number line, or place value? Explain why.







On Your Own

Find the product.

1.
$$4 \times 50 = 200$$

1.
$$4 \times 50 = 200$$
 2. $60 \times 3 =$

3.
$$\underline{} = 60 \times 5$$

Find the product.

7.
$$70 \times 4$$

8.
$$6 \times 90 = ____$$

8.
$$6 \times 90 =$$
 9. $9 \times 70 =$ **10.** $8 \times 90 =$ **___**

10.
$$8 \times 90 =$$

Find the product. Use base-ten blocks or draw a quick picture on your MathBoard.

11.
$$8 \times 50 =$$
 12. $= 3 \times 90$

12.
$$= 3 \times 90$$

13.
$$2 \times 80 =$$

Find the product.

Practice: Copy and Solve Find the product.

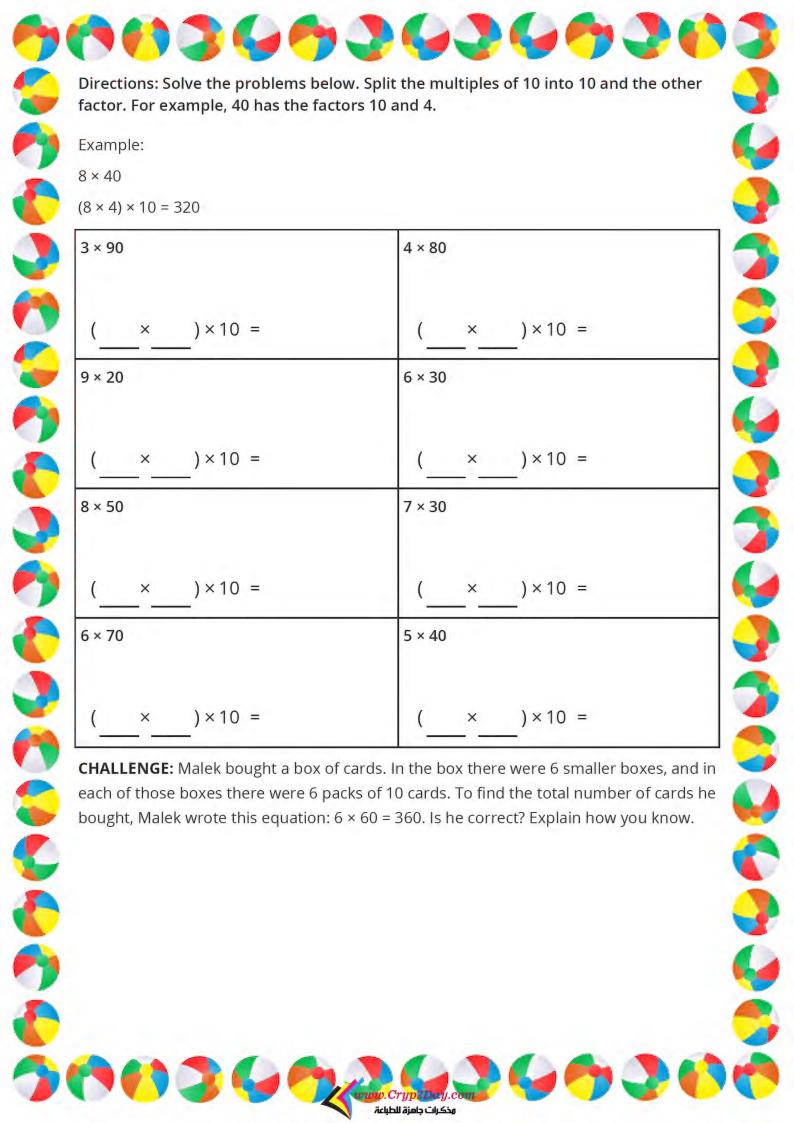
18.
$$6 \times 70$$

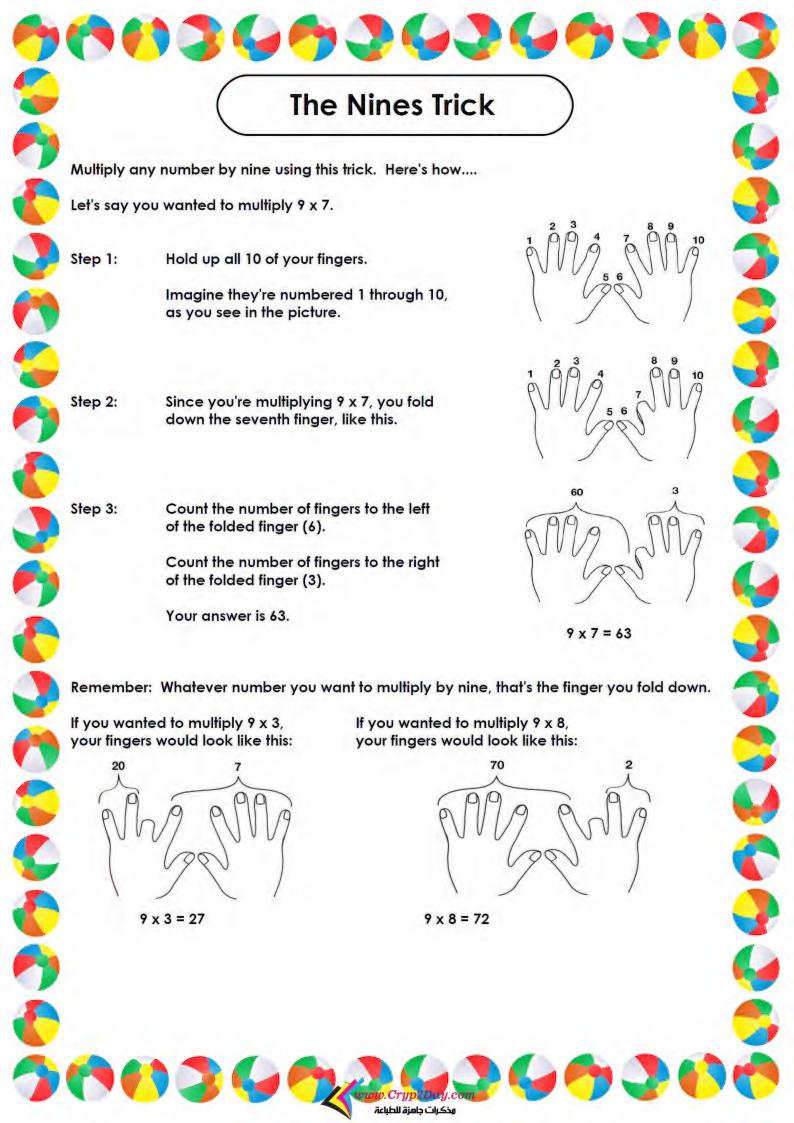
19.
$$9 \times 90$$

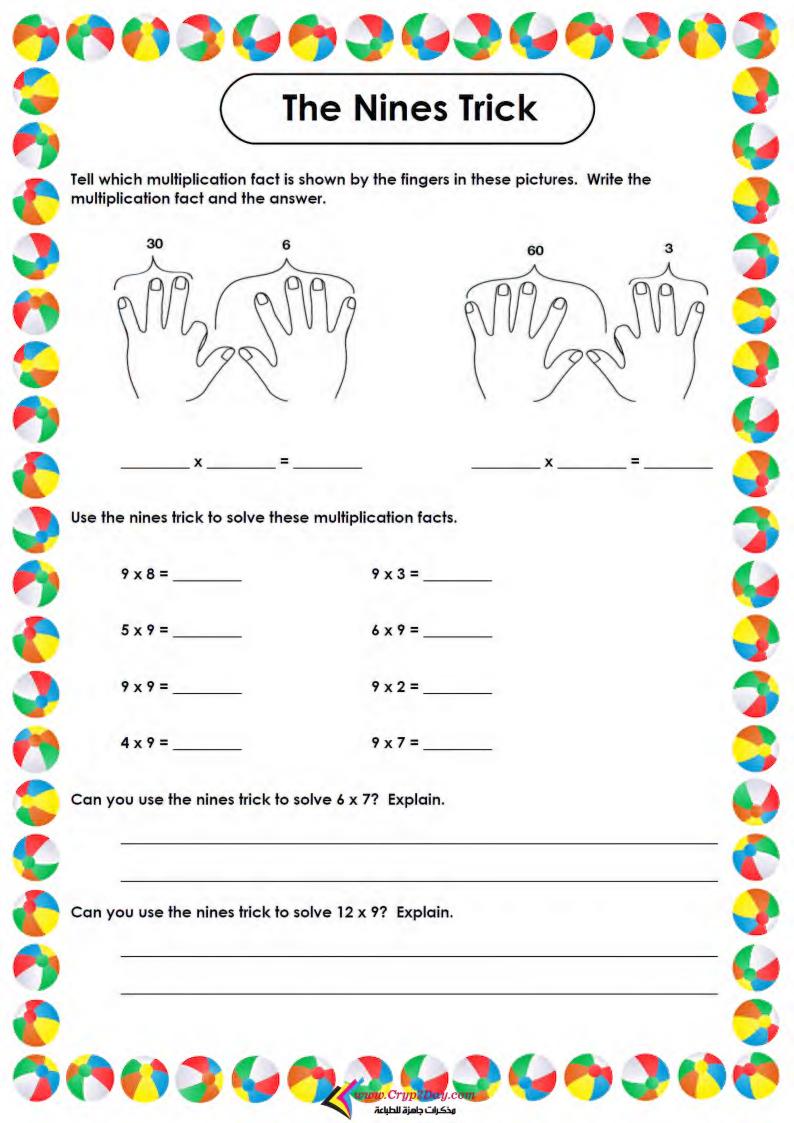
20.
$$70 \times 8$$

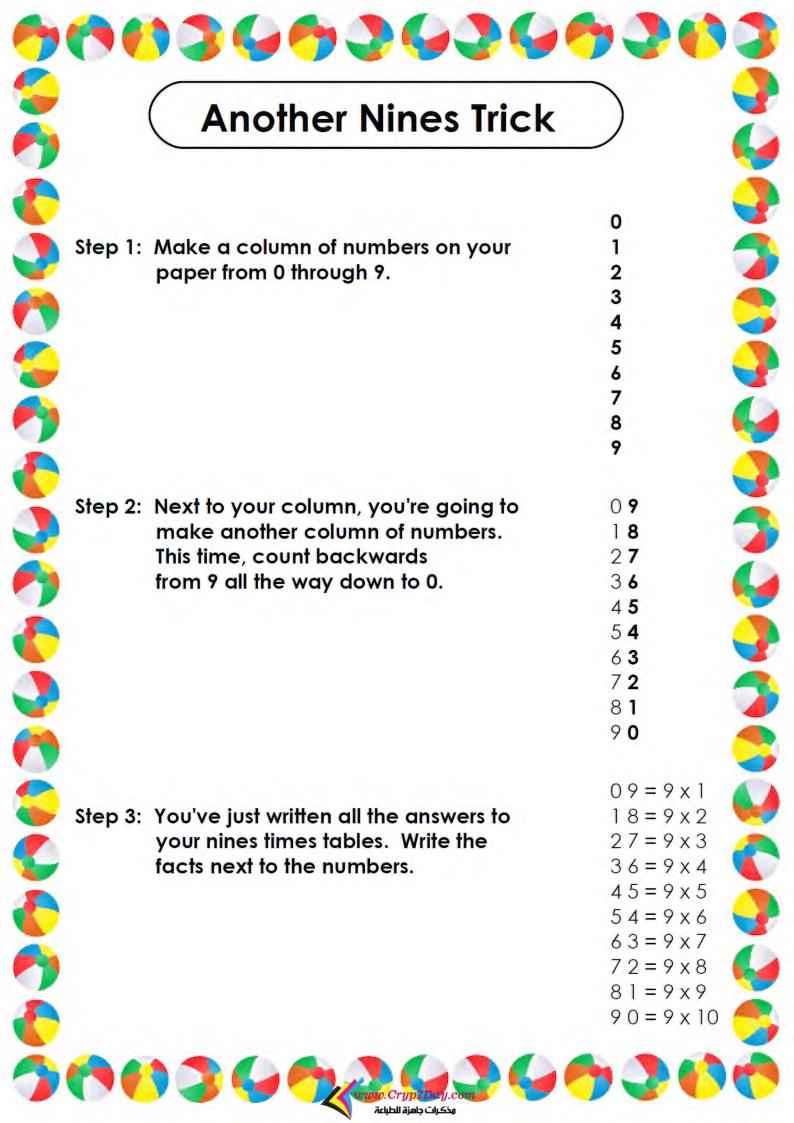
هذكرات جامزة للطباعة

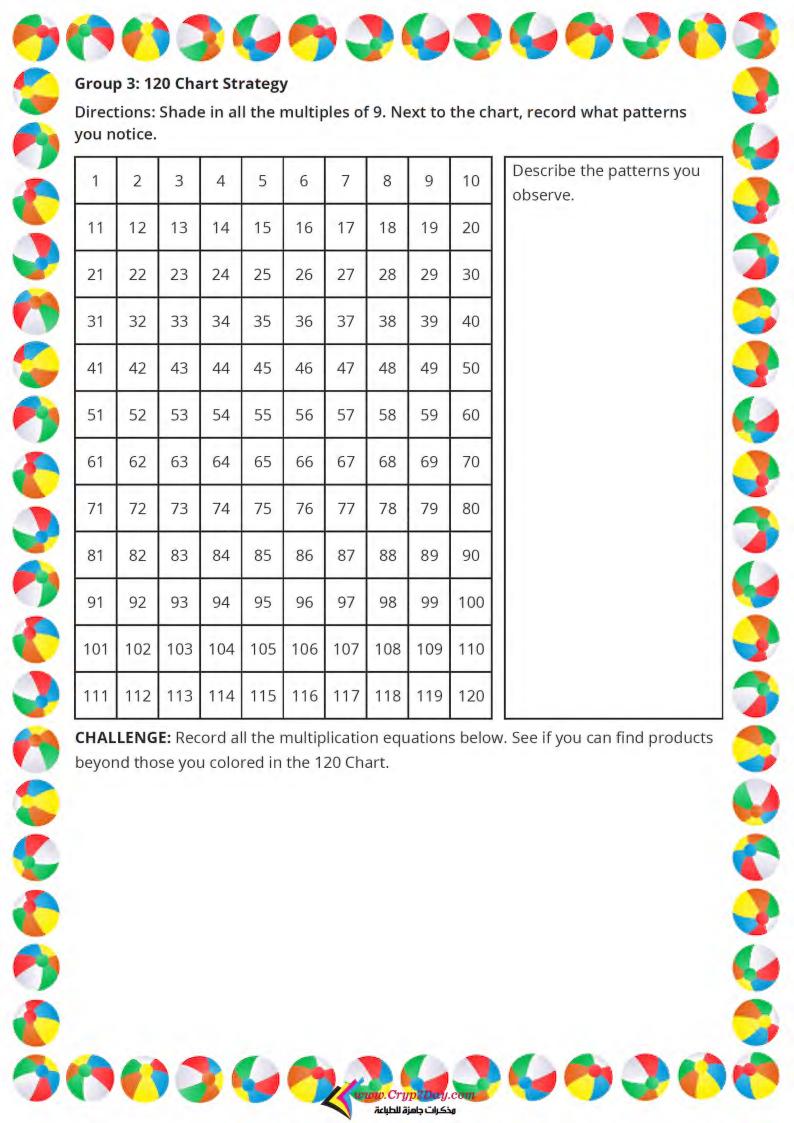
21.
$$90 \times 7$$

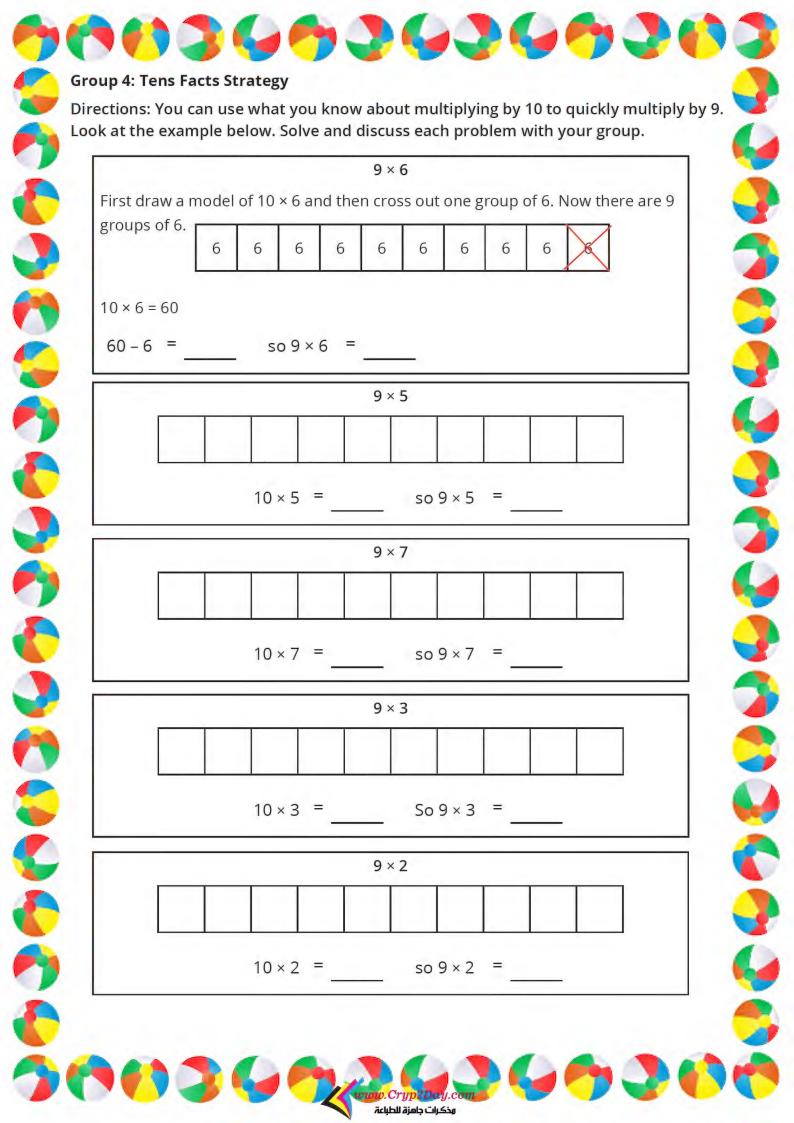


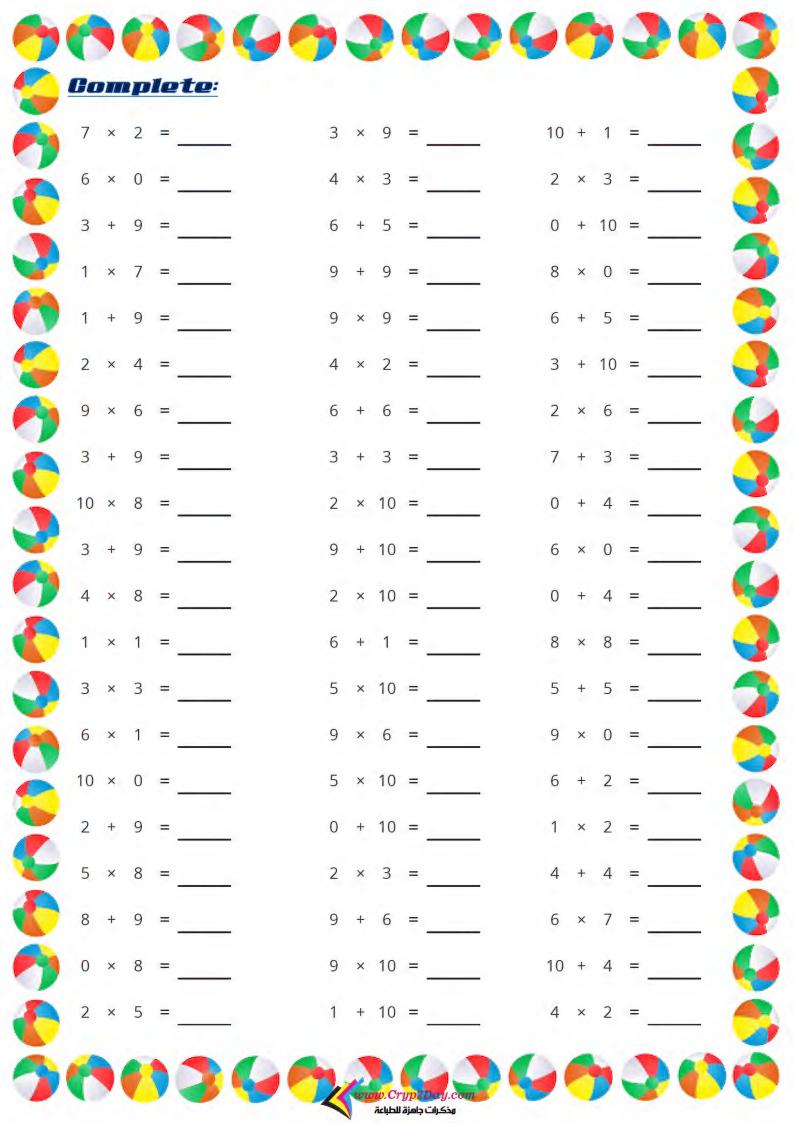


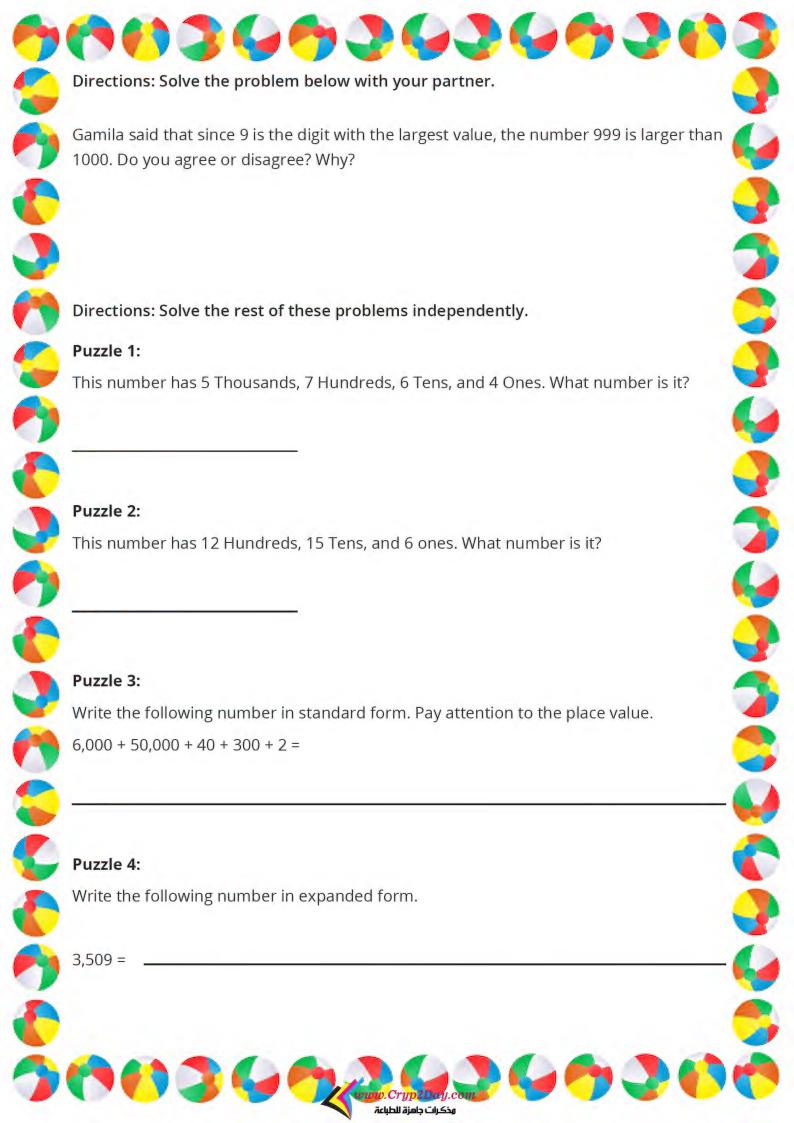


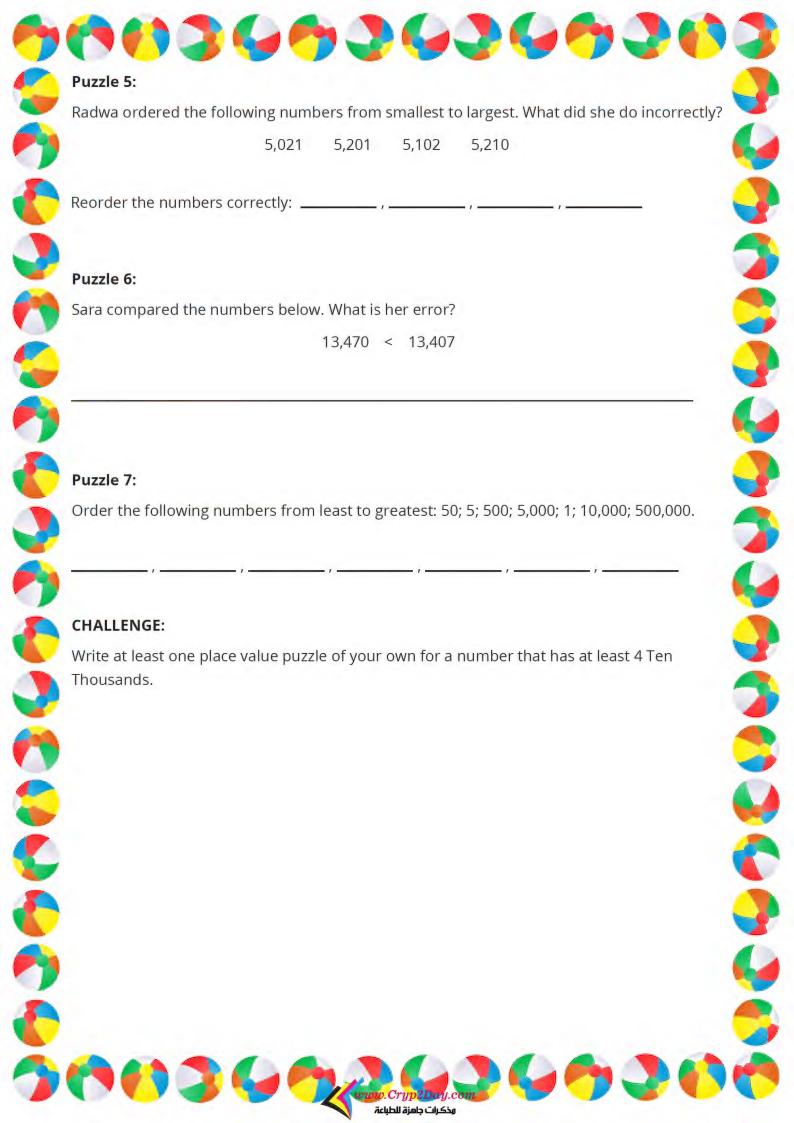














Learn About It

Many aquariums rescue and raise baby animals.



This baby flamingo is drinking food from a dropper. The dropper holds about 10 milliliters of liquid.



This baby sea lion is drinking food from a baby bottle. A bottle used for baby animals can hold about 1 liter of liquid.

milliliter of liquid.

Liter (L) and milliliter (mL) are metric units of capacity.

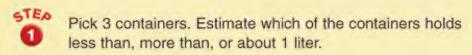
Metric Units of Capacity

1 liter = 1,000 milliliters

This water bottle holds 1 liter of water. This dropper holds 1

Try this activity to estimate and measure using liters.

Materials: 1-liter container, other containers



STEA Use water and the 1-liter container to check your estimates. 2

STEA Pick one of your containers. Does it hold more, less, or 3 about 1,000 milliliters? Explain how you know.

